

**Traffic Study for
BURBANK EMPIRE CENTER
Neighborhood Protection Plan
Burbank, California**

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Prepared For:

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1. Introduction

This study presents the findings and recommendations for the Empire Center area residential neighborhood traffic protection plan. The Empire Center is referred to as the "project" in this document.

The residential neighborhood protection plan has been developed to identify and forestall the potential for traffic, generated by the Burbank Empire Center Project, to cut-through existing residential neighborhoods and exceed the speed limit on the surrounding residential roadways. The plan is also intended to provide a mechanism to enhance the quality of life of residents in the neighborhood. Staff members in the City of Burbank Community Development and Public Works Traffic Division Departments determined the boundaries for the neighborhood protection plan area. The general study and boundaries of the neighborhood protection plan area are shown in Figure 1.

In general, neighborhood impacts resulting project-generated traffic from might occur in several ways:

- a. There may be an increase in traffic on Lincoln Street as vehicles, which travel to and from the Empire development project, exit the Interstate 5 Freeway and head towards the project entrance on Empire Avenue. Vehicles departing the project would use Lincoln Avenue when traveling from the site to the freeway.
- b. There could be an increase in cut-through traffic in the neighborhood as project-generated traffic attempts to avoid congestion and or delays associated with the left-turn movement at the intersection of Buena Vista and Empire Avenue. Vehicles may utilize southbound Buena Vista Street and then turn onto Kenmere Avenue.
- c. In general, there could be an increase in traffic speeds on Kenmere Avenue, Brighton Street and Lincoln Street resulting from the use of local roadways by project-generated traffic.

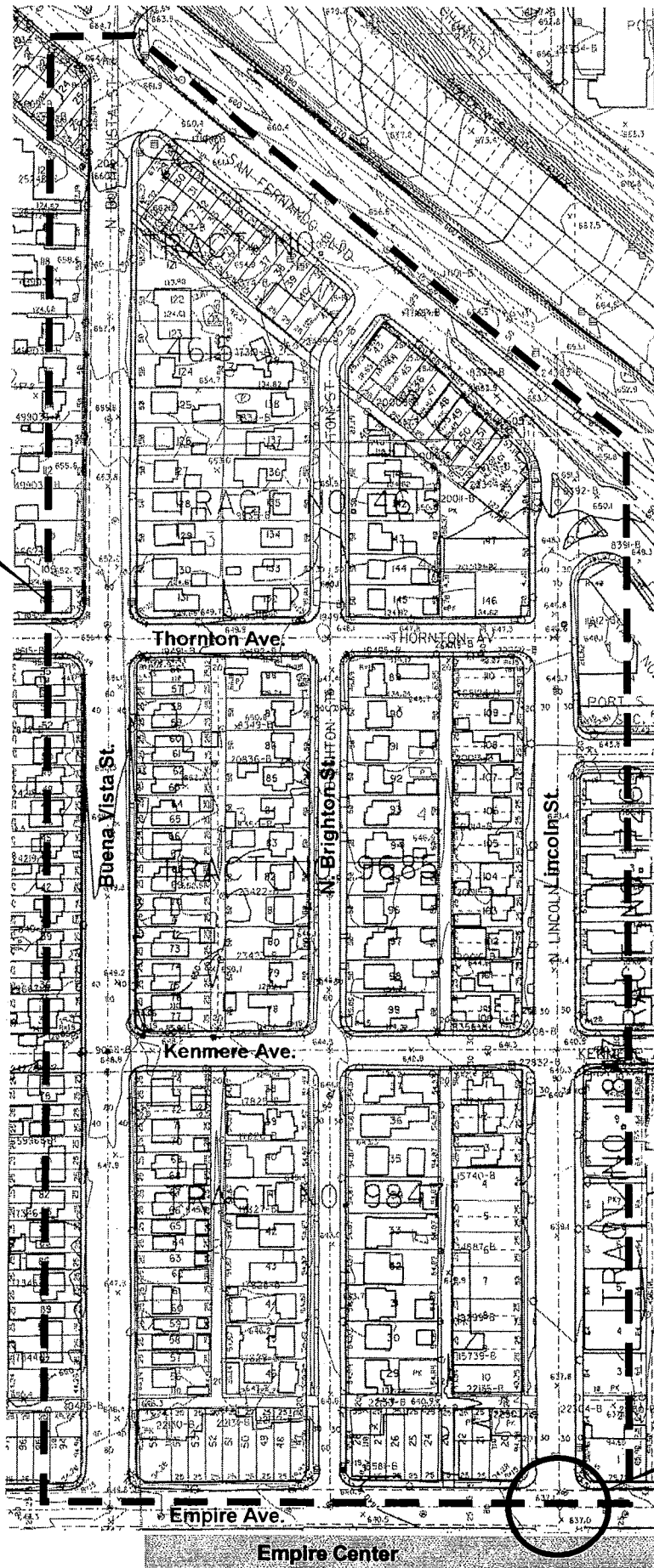
If these potential changes in traffic volume or operating conditions occur, there could be negative impacts on the overall quality of life in the neighborhood in the form of noise and safety.

The neighborhood protection plan proposed herein offers a range of options that might be implemented to alleviate these problems. The recommendations are split into two phases, short-term and long-term, and are designated as Phase 1 and 2 in this report. The Phase 1 plan has been prepared to meet the requirements promulgated during the project approval process. The City of Burbank has mandated that all recommendations in Phase 1 be in place when the Empire Center Project opens. Phase 2 represents the monitoring phase of the project and will be used to measure the effectiveness of the Phase 1 program and to identify the needs for further strategies, if necessary.

The Phase 1 program identified in this Neighborhood Protection Plan (NPP) was presented to residents in the "plan" area at a public meeting held on November 8th, 2000 at the George Washington Elementary School. Those in attendance approved the concepts contained in the Phase 1 program presented herein and the process to be followed for analyzing the need to implement further strategies during Phase 2 of the NPP program.



Study area
boundary



Empire Center
Development
main access point
aligns with Lincoln
Avenue



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Burbank Empire Center Neighborhood Protection Plan

Figure 1
Study Area

2. Study Area

The residential study area is bound on the north by the Golden State Freeway (I-5), on the west by Buena Vista Street, on the east by Lincoln Street and on the south by Empire Avenue. At the northern end of the study area adjacent to Lincoln Street, the land-use is oriented toward commercial activities. Between Thornton Avenue and Kenmere Avenue along the Lincoln corridor, the area is residential. South of Kenmere Avenue on Lincoln Street, the adjacent land uses are commercial and light industrial.

A discussion of roadways within the residential study area is provided below.

Lincoln Street is a north-south collector street, which has an access at the northern end onto the I-5 Freeway. Within the study area, Lincoln Street has a 60-foot pavement width. The main intersection along Lincoln Street within the study limits is at Kenmere Avenue. The Lincoln Street/Kenmere Street intersection is controlled by stop signs on Kenmere Street. Traffic has been observed to travel at moderate speeds along this roadway.

Buena Vista Street is a major arterial road running north to south. Buena Vista Street forms the western boundary of the study area. It has two travel lanes in each direction. Access to the plan area is provided at the intersection of Buena Vista Street at Kenmere Avenue. Additional access is provided to the plan area at the intersection of Buena Vista Street at Thornton Avenue.

Kenmere Avenue is a local street that runs east to west through the center of the study area. The key intersection on this roadway is at Lincoln Street where stop signs are provided for Kenmere Avenue traffic. An uncontrolled intersection also exists at Brighton Street, which is a local street.

Brighton Street is a north to south-running local street, which bisects the study area. The intersection with Kenmere Avenue is uncontrolled.

Thornton Avenue is a secondary roadway, which runs east to west near the northern edge of the study area. It provides alternative access to Burbank Airport.

Empire Avenue is a major arterial roadway, which forms the southern boundary of the study area and the northern boundary of the Empire Center development. A major access point to the project is provided at Lincoln Street with secondary access at Brighton Street.

3. Project Goals

With the construction of the proposed Burbank Empire Center development south of the study area on Empire Street, there is some expectation that traffic volumes through the study area neighborhood will increase. This could result in increased noise from traffic, an increase in potential vehicle conflicts with children and pedestrians and a general deterioration in the quality of life for residents of the neighborhood.

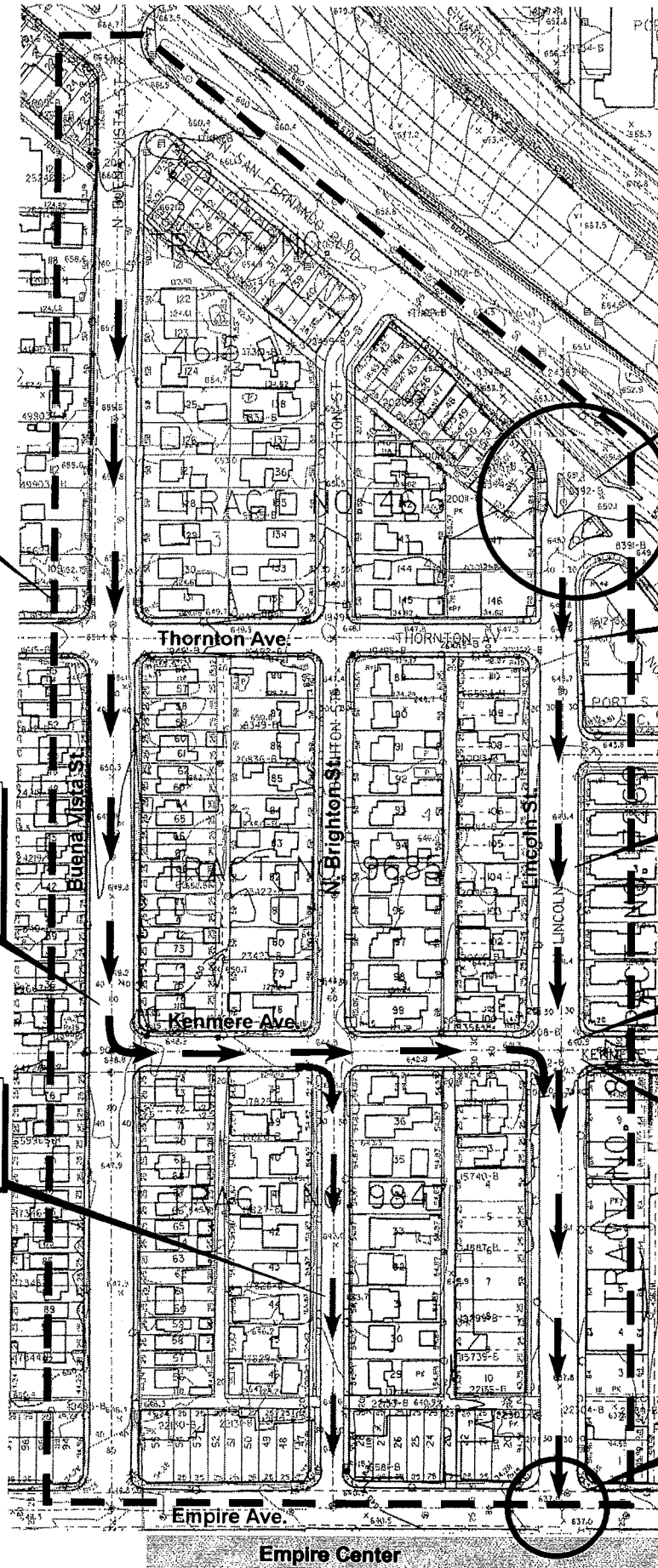
The study focuses on several key roadways and intersections. In particular, it addresses concerns that were documented in the EIR process that traffic will increase on Lincoln Street due to its access to the Interstate 5 Freeway at the northern edge of the study area and access to the Burbank Empire Center at the southern edge of the area. In addition, the possibility of cut-through traffic from Buena Vista Avenue to Lincoln Street via Kenmere Street is also addressed, as is possible project-related traffic that might utilize the southern section of Brighton Street.

This study proposes a number of measures in a two-staged approach to help reduce the potential for neighborhood impacts from Burbank Empire Center project-related traffic. These measures are in addition to several roadway improvements already proposed by the City to improve traffic conditions in the area. The measures are designed to slow traffic through the neighborhood and to provide a negative incentive to using the local streets. This should result in a safer environment for residents and children while also enhancing the overall look and feel of the area. Figure 2 summarizes the key issues to be addressed by the Neighborhood Protection Plan.

This study splits the proposed improvements into two phases.

Phase 1 represents those measures that will be implemented in the short term. They are also required by the conditions set forth in the approval process of the project, which require they be in place when the Empire Center project begins operation. They are generally considered effective measures in enhancing neighborhood traffic flow but lack any aesthetic enhancements. The budget for proposed improvements in Phase 1 is \$100,000.

Phase 2 improvements are more extensive and hence, more expensive and represent longer-term improvements. They build upon the Phase 1 measures by adding aesthetic enhancements such as planting and landscaping so the look of the improvements significantly adds to the quality of the residential neighborhood. In addition, the Phase 2 improvements can be more complex and should involve the local community in a determination of whether they should be implemented because they could dramatically alter the flow of traffic in the neighborhood. An example is the installation of a diagonal diverter at the intersection of Kenmere Avenue at North Brighton Street, which could significantly impact local access to properties. The responsibility for implementing the Phase 2 improvements lies within the City of Burbank. The need for further improvements under Phase 2 will be determined through a monitoring program



Study area boundary

Freeway access directly onto Lincoln Ave.

No visual cues to establish residential nature of the street

Potential for cut-thru traffic from southbound Buena Vista along Kenmere Ave. to the main site entrance at Lincoln/Empire

Increased traffic on Lincoln as trips to new development exit freeway and enter site on Empire St.

High speed traffic on residential street due to lack of obstructions and wide roadway (60' pavement width)

Possibly some potential for cut-thru traffic to use Brighton to access Empire Ave.

No stop signs or obstructions at Kenmere on Lincoln, therefore no incentive for traffic to slow down

Site access point on Empire at Lincoln



4. Currently Planned Improvements

As part of the Empire Center Project, the City of Burbank and Zelman Retail Partners will be implementing a number of improvements to the circulation system in the area, which will have a major positive effect on traffic flow and congestion reduction in the plan area. Figure 3 shows the location of these planned improvements. Additional data is also included in Appendix A. These include the following:

A. Empire Avenue Underpass

The construction of an underpass under the Interstate 5 Freeway on Empire Avenue will allow access to the Burbank Empire Center site directly from the freeway without using the Lincoln Street exit. This should help minimize project traffic on Lincoln Street. The improvement affects both northbound and southbound traffic to and from the freeway. Funding for this project has not been programmed.

B. Victory Boulevard Realignment Victory Boulevard will be realigned to provide a new T-intersection with Burbank Boulevard. This will eliminate the current 5-leg intersection at Victory Place/Burbank Boulevard/Victory Boulevard. This proposed improvement is directly related to the redevelopment of the parcel on the northwest corner of Victory Place and Burbank Boulevard.

C. Buena Vista Avenue/Empire Avenue Intersection

It is proposed to add a southbound left-turn lane to this intersection. This will improve the capacity of the left-turn movement onto Empire Avenue and encourage Burbank Empire Center site traffic to use Buena Vista Avenue. The measure is also expected to minimize the potential for project-related traffic to "cut-through" the neighborhood using Buena Vista Avenue and Kenmore Avenue.

D. Traffic Signalization

New and upgraded traffic signals will be installed at the following locations.

- Burbank Boulevard at Victory Boulevard.
- Victory Boulevard at Victory Place.
- Empire Avenue at Val Preda Street.
- Empire Avenue at Lincoln Street.
- Empire Avenue at Buena Vista Street.
- Project Driveway on Buena Vista Street between Empire Avenue and the railroad crossing.

E. Streetscape Improvements

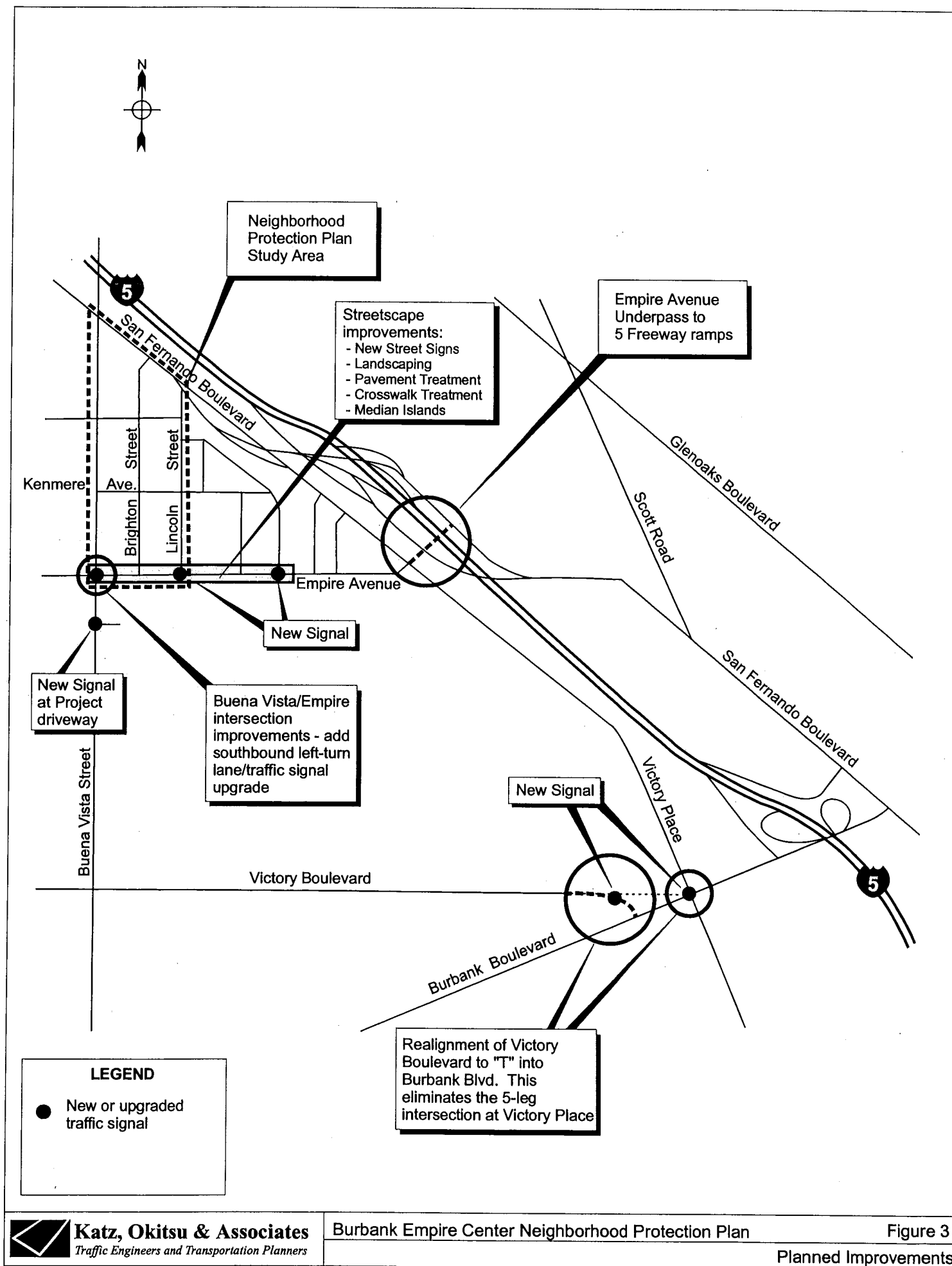
The Empire Center Project will include a number of streetscape improvements in the area surrounding the site. In the vicinity of the Neighborhood Protection Plan area, these include the following improvements along Empire Avenue:

- New street signs.
- Landscaping.

- Pavement treatments.
- Crosswalk treatments.
- Median islands.

F. Parking Improvements

Although not included as a part of the Neighborhood Protection Plan, the City of Burbank will be undertaking an assessment of parking needs in the area around Lincoln Street and Empire Avenue. Any improvements, such as angle parking for example, will be undertaken by the City and have not been considered as part of this NPP.



5. Proposed Phase 1 Improvements

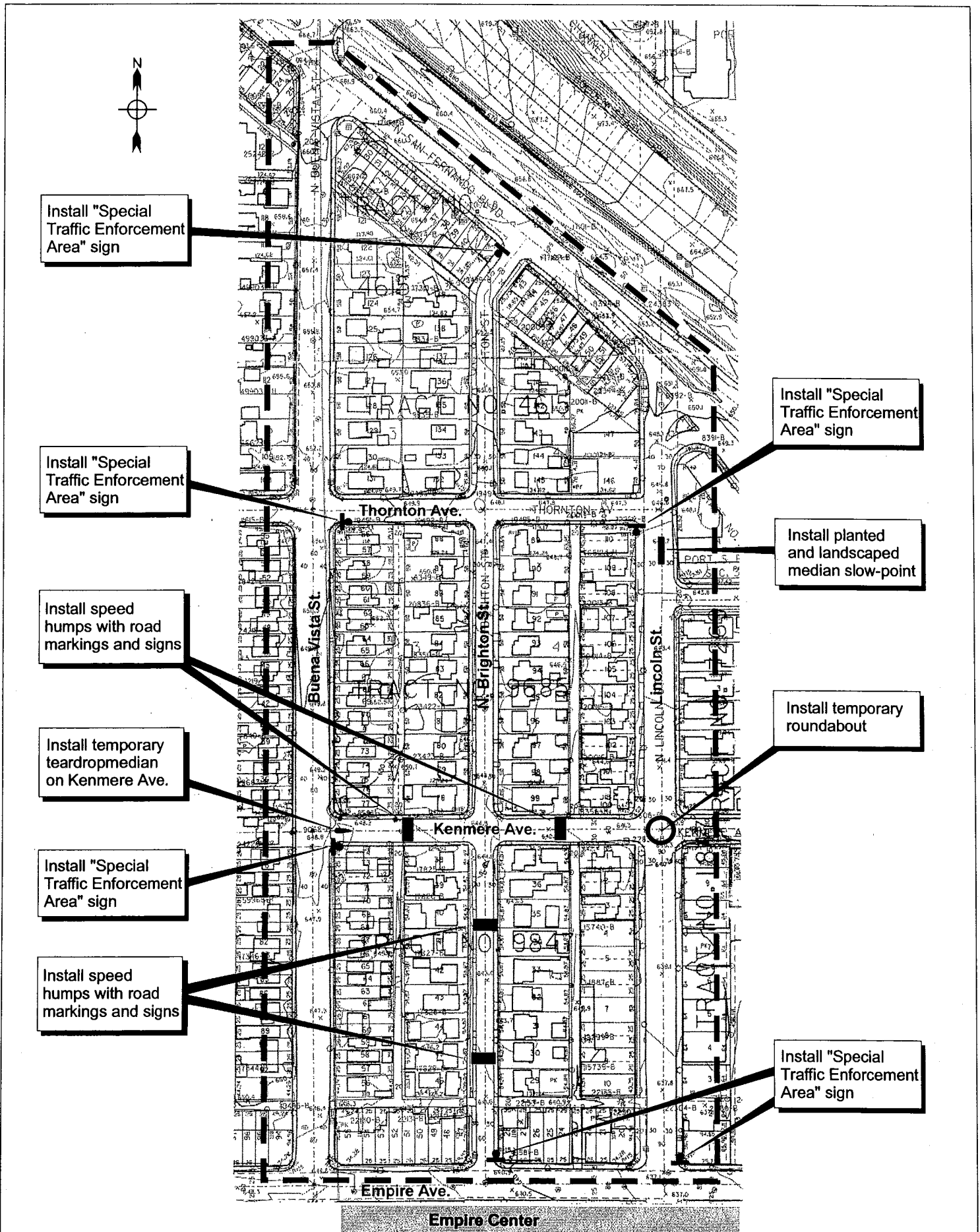
Figure 4 shows the Proposed Phase 1 improvements. Appendix B includes additional information on the key elements of the program as presented to the community. The proposed program of improvements was developed jointly with the members of the City of Burbank Community Development and Public Works Departments and community residents. The measures in Phase 1 are focused onto Lincoln Street, Kenmere Avenue and Brighton Street, as well as select entry points to the study area.

A. Lincoln Street Corridor

Lincoln Street provides direct access to the Burbank Empire Center project site from the Interstate 5 Freeway. Lincoln Street is a wide road with 60 feet of pavement. Even with on-street parking, the remaining pavement is sufficiently wide to encourage higher speed traffic than would normally be preferred in this environment. One way to reduce the potential for speeding is to introduce a median at the northern end of the street in the vicinity of Thornton Avenue. The median would have two effects. One would be to create a "slow point" on the street. Secondly, by landscaping the median we also reinforce the fact that we are in a residential neighborhood. A short median island would be located just south of Thornton Avenue, thereby retaining direct access to commercial properties on the east side of Lincoln Street and avoiding the creation of access impacts to the Thornton Avenue/Lincoln Street intersection. The median island could be 20 to 30 feet long and up to 16 feet wide depending on its final design and approval by the Public Works Department. With a 16-foot wide island, there would be room for two 14-foot travel lanes and two 8-foot parking lanes on Lincoln Street. As noted above, and approved by the residents, it is proposed to make this island an attractive, planted design, because it alerts drivers that they are entering a residential area. The landscaping as envisaged at the community workshop would be the same as that planted in the median just to the north at the intersection of Lincoln Street and San Fernando Boulevard.

Traffic signs will also be installed near Thornton Avenue on Lincoln Street. The sign display would read: "Special Traffic Enforcement Area – Please obey all traffic laws, violators will be cited". It is anticipated such signs would help delineate the neighborhood and discourage speeding.

Observation, monitoring and control of traffic patterns at the intersection of Lincoln Street and Kenmere Avenue are of particular concern in the development of this Neighborhood Traffic Protection Plan. Currently, the intersection is uncontrolled for Lincoln Street traffic and has stop signs for Kenmere Avenue traffic. It is proposed to introduce a temporary roundabout at the intersection. This would act as a traffic control device to prevent higher speed traffic on Lincoln Street and would further discourage use of the street by Empire Center project traffic. In addition, these measures would act as a deterrent for "cut-through" traffic from Buena Vista Avenue to Lincoln Street via Kenmere Avenue.



The temporary nature of the design will allow the City and community members to test its effectiveness and desirability, which makes this measures affordable to install and would provide a transition to the development of more complex measures in the future.

Traffic calming measures identified in Phase 2 would upgrade measures installed in Phase 1 to provide a more aesthetic look with the addition of planting and landscaping.

No enhancements other than signing are proposed for the southern end of Lincoln Street due to the industrial/commercial nature of the street at this location.

B. Kenmere Avenue Corridor

Kenmere Avenue provides a potential "cut-through" route for Empire Center Traffic from Buena Vista Avenue. To help overcome the potential for increases in traffic, it is proposed to introduce signage at Buena Vista Avenue which reads as follows: "Special Traffic Enforcement Area – Please obey all traffic laws, violators will be cited". In addition, speed humps are proposed for the street. One speed hump would be placed approximately mid-way between Buena Vista Avenue and Brighton Street. Another would be placed midway between Brighton Street and Lincoln Street. The humps would have associated roadway markings and warning signs. The humps would be placed to avoid driveways and utilities and where possible, would be placed near lighting columns to enhance their visibility at night.

These measures would provide significant deterrence to cut-through traffic and would reduce speeds of all traffic on the road.

C. Brighton Street Corridor

There is a possibility that "cut-through" traffic from Buena Vista would also utilize the section of Brighton Street south of Kenmere Avenue to access the new Empire Center development. To help minimize this risk and minimize the potential for increased traffic volume on this street, it is proposed to introduce two speed humps on this block. The placement would be determined during the design phase but would avoid driveways and utilities and, where possible, would be placed near lighting columns to enhance their visibility at night.

A "Special Enforcement Area" sign would also be placed at the intersection of Brighton Street and Empire Avenue.

D. Other Measures

"Special Enforcement Area" signs would also be placed on specific entrance points to the study area to define the neighborhood boundaries. In particular, placement of these signs is recommended at Thornton Avenue/Buena Vista Avenue and Thornton Avenue/San Fernando Road intersections.

6. Proposed Phase 2 Improvements

Figure 5 shows the proposed Phase 2 measures. Appendix C includes additional information on the key elements of this component of the program as presented to the community. These are discussed by corridor below:

A. Lincoln Street Corridor

In Phase 2, it is proposed that temporary measures detailed in Phase 1 be made permanent. The traffic circle at Lincoln Street and Kenmere Avenue would be landscaped – possibly with irrigation included.

If deemed necessary, it is also proposed to install landscaped mid-block curb “bulges” along Lincoln Street. These landscaped “bulges” would be used to slow traffic and delineate parking lanes on both sides of the road. “Bulges” narrow roadways and tend to make motorists uncomfortable driving at higher speeds. The curb “bulges” would be placed on both sides of Lincoln Street near the eastern leg of Thornton Avenue where it intersects with Lincoln Street. Additional “bulges” could be placed approximately midway between the roundabout and the first set of “bulges”. The first set of these “bulges” would be set to avoid blocking driveways and any interference with turning traffic.

B. Kenmere Avenue Corridor

In Phase 2, if needed, a peak hour left-turn prohibition sign could be placed at the intersection of Buena Vista Avenue at Kenmere Avenue. This would enforce the goal of reducing the potential for “cut-through” traffic to the Empire Center site. However, this measure has the potential to restrict residential access and consequently, should not be introduced unless specifically requested by the residents.

One option discussed at the onset of the development of the plan, which would have a drastic effect on neighborhood circulation, includes the introduction of a diagonal diverter onto Kenmere Avenue at the intersection with Brighton Street. These diverters would eliminate the through traffic on Kenmere Avenue, forcing westbound traffic to turn north on Brighton Street. In addition, eastbound traffic on Kenmere Avenue would be forced to turn south onto Brighton Street, northbound traffic on Brighton Street would be forced to turn right onto Kenmere Avenue, and southbound traffic on Brighton Street would have to turn west onto Kenmere Avenue. This is an effective measure against through traffic but could have serious adverse impacts on residential access. For this reason, it should only be introduced if approved by residents on Kenmere Avenue and Brighton Street.

C. Brighton Street Corridor

There is a possibility that “cut-through” traffic from Thornton Avenue would utilize the section of Brighton Street north of Kenmere Avenue to access the new Empire Center development. At the request of residents at the community meeting, to minimize this risk and the potential for increased traffic volume on this street, it is proposed to introduce two speed humps on this block. The placement would be determined during the design phase but would avoid driveways and utilities and, where possible, would be placed near lighting columns to enhance their visibility at night.



Install speed humps with road markings and signs

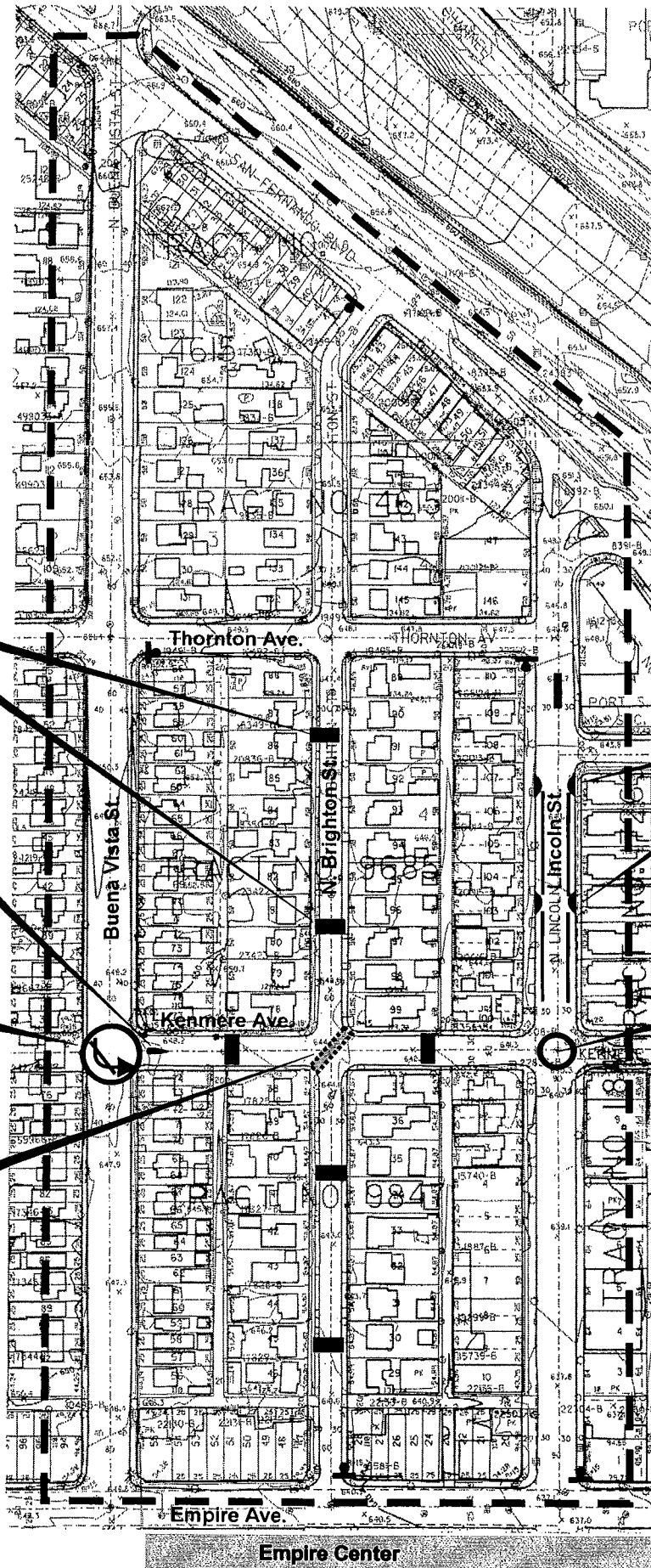
Install landscaped and/or planted teardrop median on Kenmere Ave.

Install southbound peak hour left-turn prohibition sign

Consider installation of 4-way stop-signs or diagonal diverter. Neighborhood residents should be involved with this decision

Determine feasibility of permanent planted and/or landscaped bulges with striped parking lanes

Install permanent landscaped and/or planted roundabout



Empire Center



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Burbank Empire Center Neighborhood Protection Plan

Figure 5

Phase 2 Improvements

7. Monitoring Program

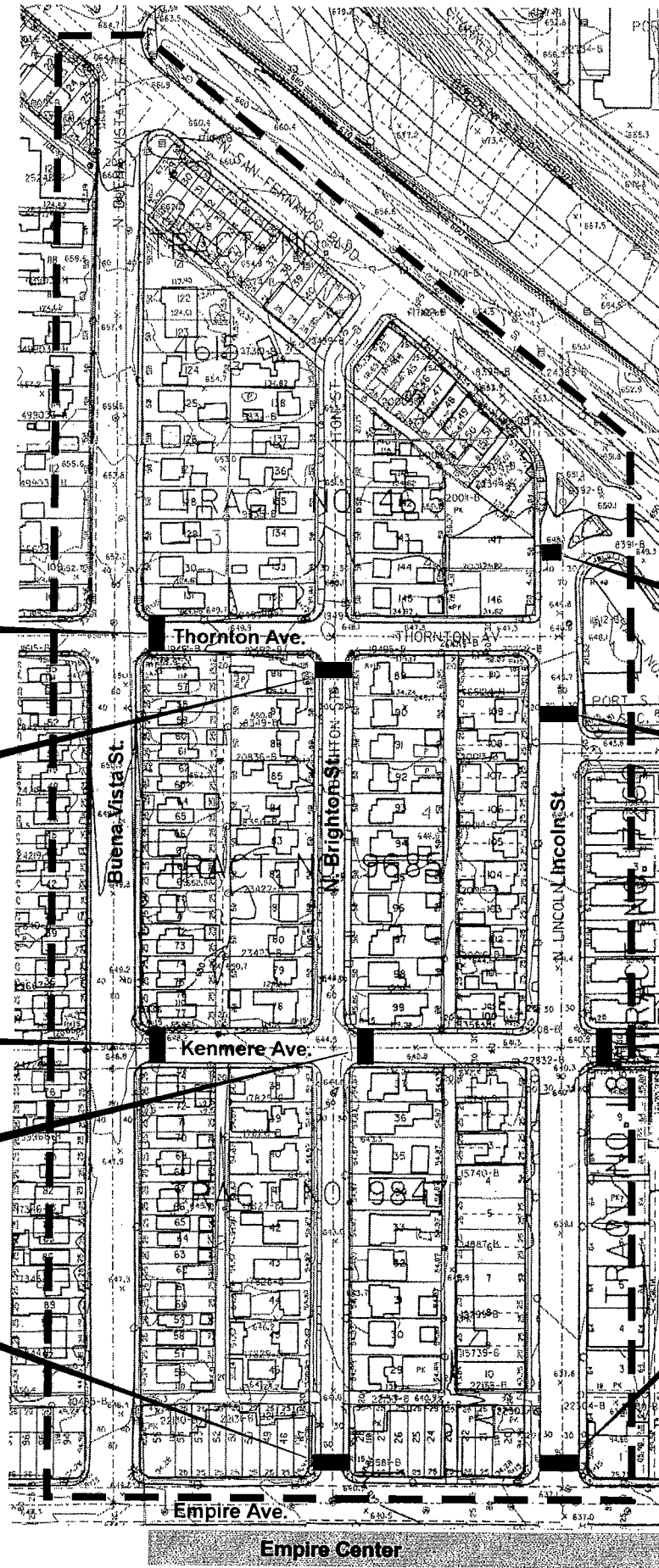
The only way to determine if the Phase 1 program is effective in achieving the desired results is to undertake a monitoring program. The basis for this program is to periodically measure the volume of traffic on the key streets in the neighborhood. Daily traffic counts were taken in August 2000. Figure 6 shows the traffic count volumes. These counts serve as documentation of baseline conditions and will be compared with data collected six months and one year after the Burbank Empire Center project is opened and the temporary measures are introduced. This data comparison will document changes in traffic patterns and help determine effectiveness of the Phase 1 measures. Utilizing the results of the comparison, the need for Phase 2 measures, such as speed humps or diverters, and the scheduling of implementation of needed measures can be determined.

It is recommended that a meeting with local residents be conducted the 6 months after opening of the project and implementation of Phase 1 measures. Input will be considered in finalizing strategies for the implementation of Phase 2 measures.

As can be seen from Figure 6, Lincoln Street currently carries the highest daily traffic volumes in the study area – over 7,200 vehicles on the segment just north of Empire Avenue. At the north end, on the segment between Floyd Street and Thornton Avenue daily volumes are about 8,900 vehicles. A review of the raw traffic count data also shows that there are about 300 vehicles northbound and over 300 vehicles in the southbound direction in the AM peak. During the PM peak, the northbound traffic is as high as 642 vehicles in the northern end of the street, while the southbound volumes approach 250.

Thornton Avenue also carries moderately high volumes, which reflect its use as an alternative route to the airport. Daily volumes are about 6,000 vehicles. In the AM peak, the eastbound volumes are 192 with 200 in the westbound direction. In the PM peak, the 277 vehicles travel eastbound and 193 travel westbound.

Kenmore Avenue and Brighton Street all carry directional volumes of just fewer than 20 vehicles to about 45 vehicles in either peak hour. This reflects the fact that the street generally carries local traffic only. Daily volumes are about 900 and 580 vehicles respectively.



→ 3,366
← 2,463

↑ 282
↓ 303

→ 409
← 493

→ 377
← 438

↑ 246
↓ 339

↓ 5,402

↑ 5,611
↓ 3,308

→ 640
← 336

↑ 4,003
↓ 3,255

Legend
→ Count direction
XXXX 24 Hour Count

8. Conclusions

This report offers staged suggestions to address potential neighborhood impacts caused by the proposed Burbank Empire Center development. The measures identified in Phase 1 are designed to both enhance the quality of life in the neighborhood and be effective in preventing significant increases in traffic on residential streets as a result of the Burbank Empire Project. Some identified measures specified in Phase 1 are temporary in nature and can be used to assess the effectiveness of the plan. In Phase 2, those measures, which were effective in Phase 1, are made permanent and their appearance is enhanced with planting and landscaping. In addition, new measures could be introduced, such as additional speed humps, "bulges" and diagonal diverters, if the residents believe there is a need for them after the opening of the Empire Center project.

The measurement of the effectiveness of this plan will depend upon the accurate monitoring of traffic before and after the opening of the project site and on input from the residents in the neighborhood.

The estimated costs for the Phase 1 and 2 proposed improvements are provided in Appendix D. These implementation costs are for planning purposes only and are subject to change based on final design and the cost of materials.

Appendix A – Planned Improvements

Burbank Empire Center Neighborhood Protection Plan

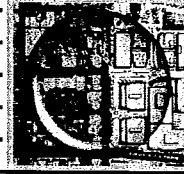
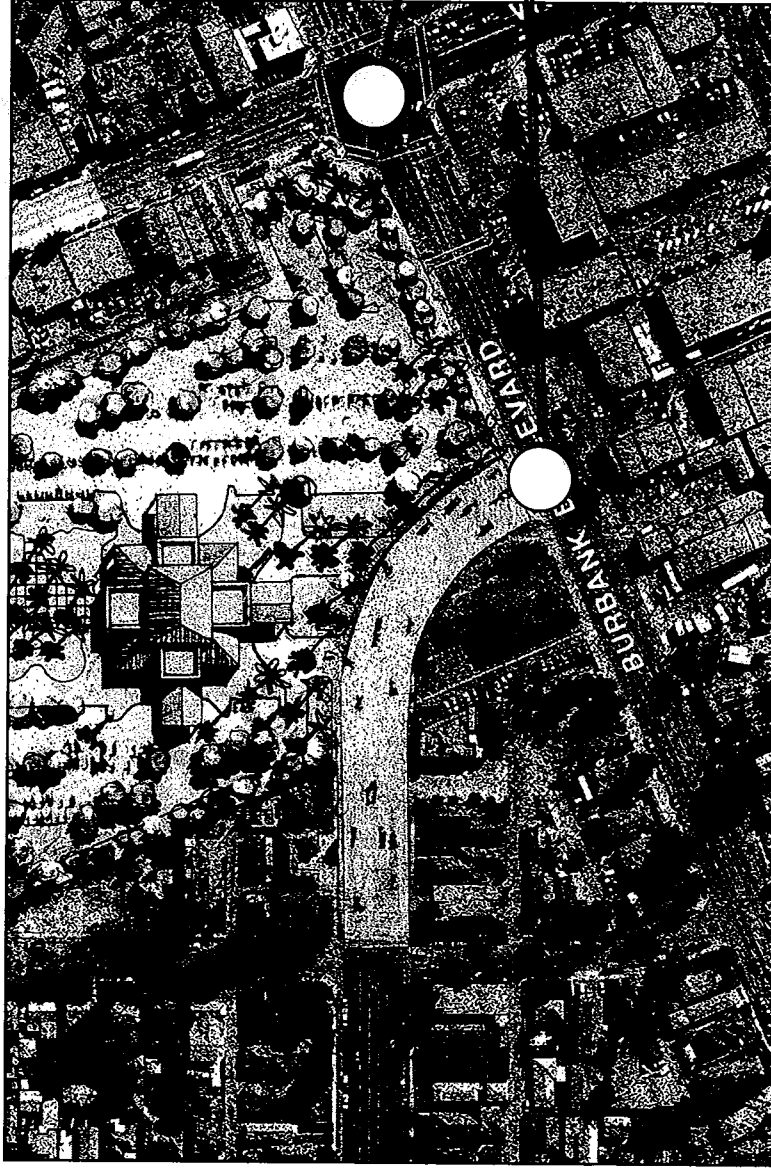
Currently Planned Improvements

Burbank Blvd/Victory Blvd.

Realignment of Victory
to eliminate 5-leg
intersection at Burbank
and Victory Place

5-leg simplified to 4-leg

New "T" Intersection



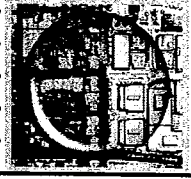
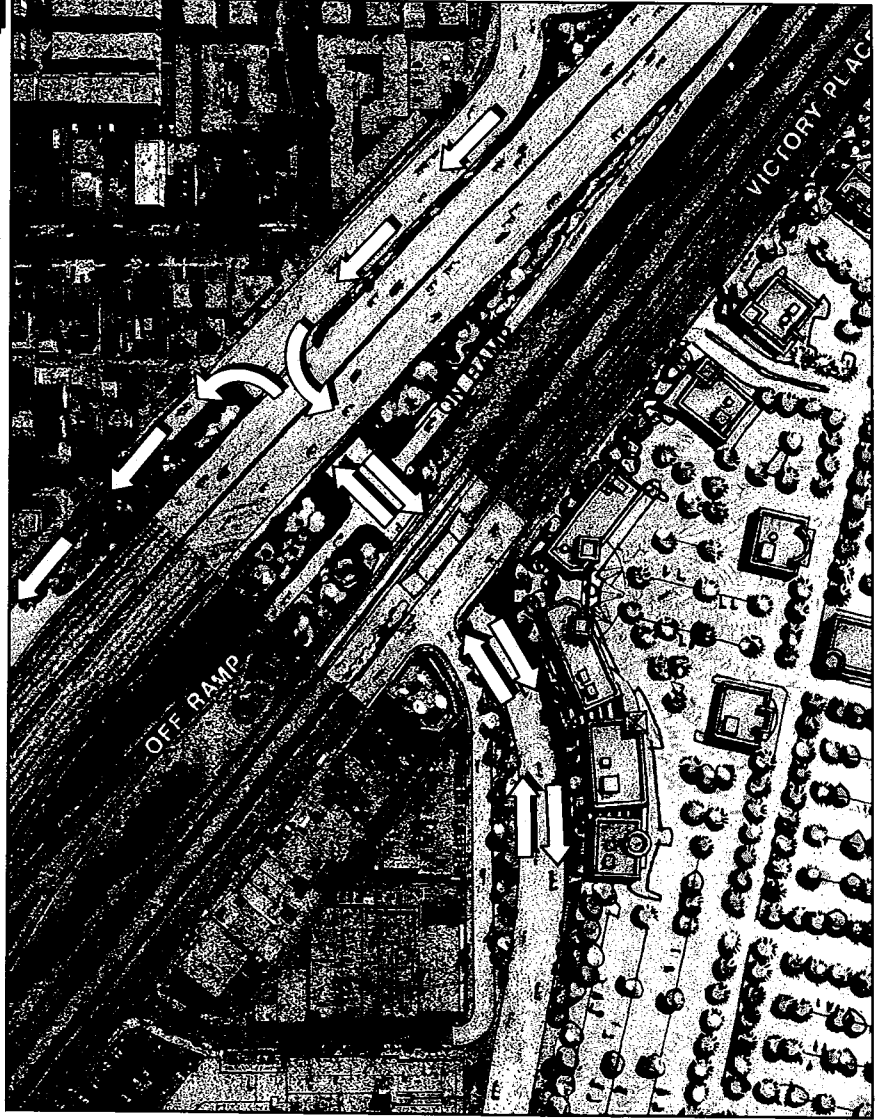
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Currently Planned Improvements

Empire Ave. Underpass (Long Term Improvement)

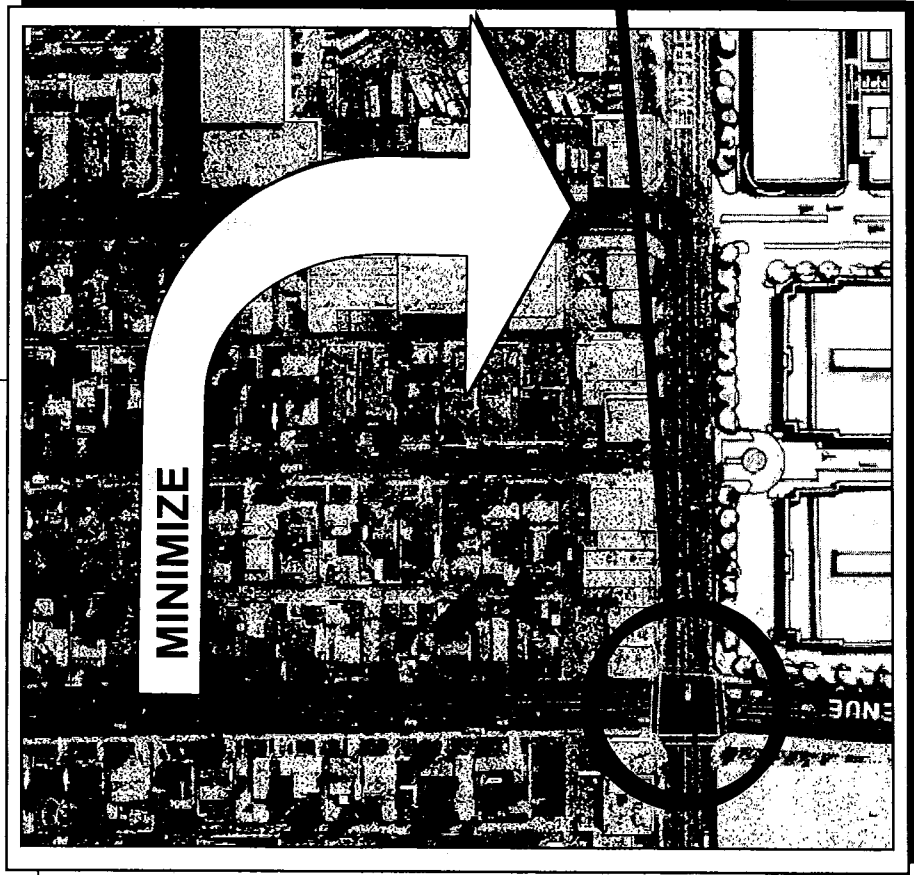
Underpass to be built
to connect Empire
with northbound
freeway ramps.
Allows direct access
to the development
via Empire Ave.



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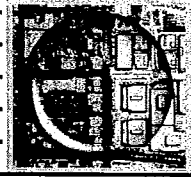
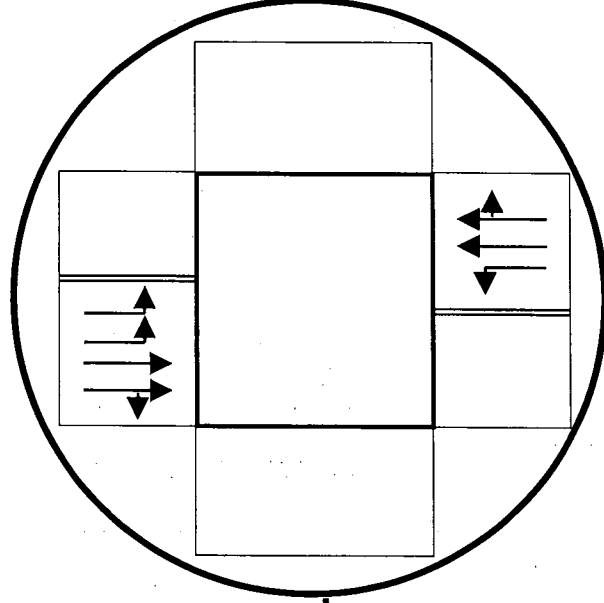
Burbank Empire Center Neighborhood Protection Plan

Currently Planned Improvements



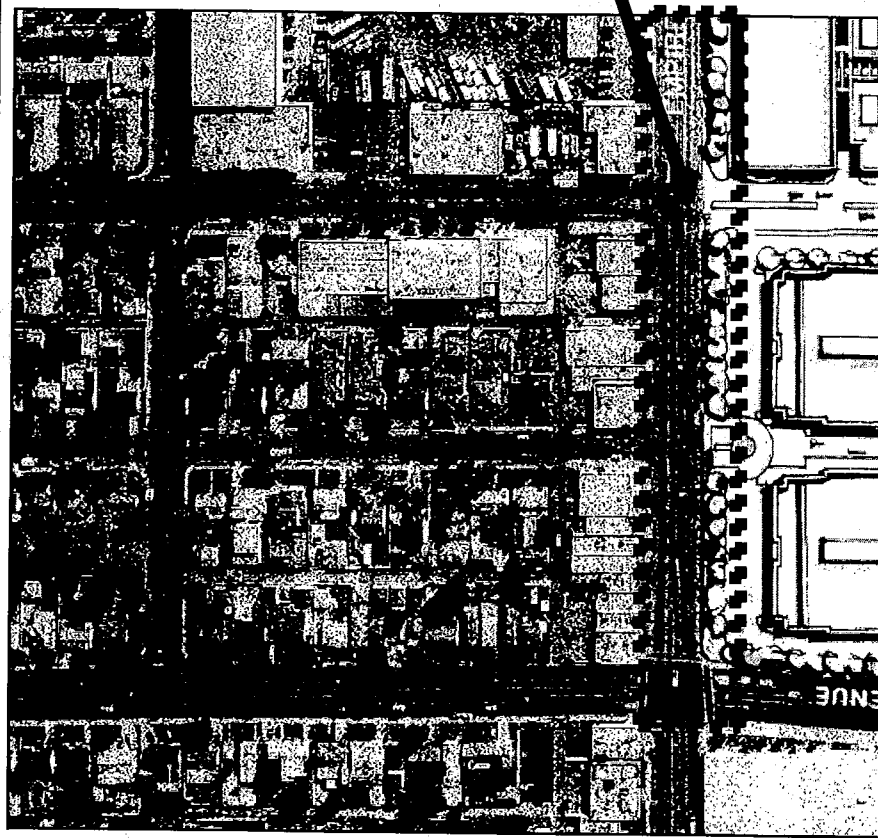
Buena Vista/Empire Ave.

**Additional
southbound left-turn
lane to help prevent
cut-thru traffic**



Burbank Empire Center Neighborhood Protection Plan

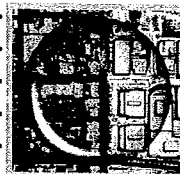
Currently Planned Improvements



Empire Ave.

Streetscape
improvements along
Empire which include:

- New Street Signs
- Landscaping
- Pavement Treatment
- Crosswalk Treatment
- Median Islands

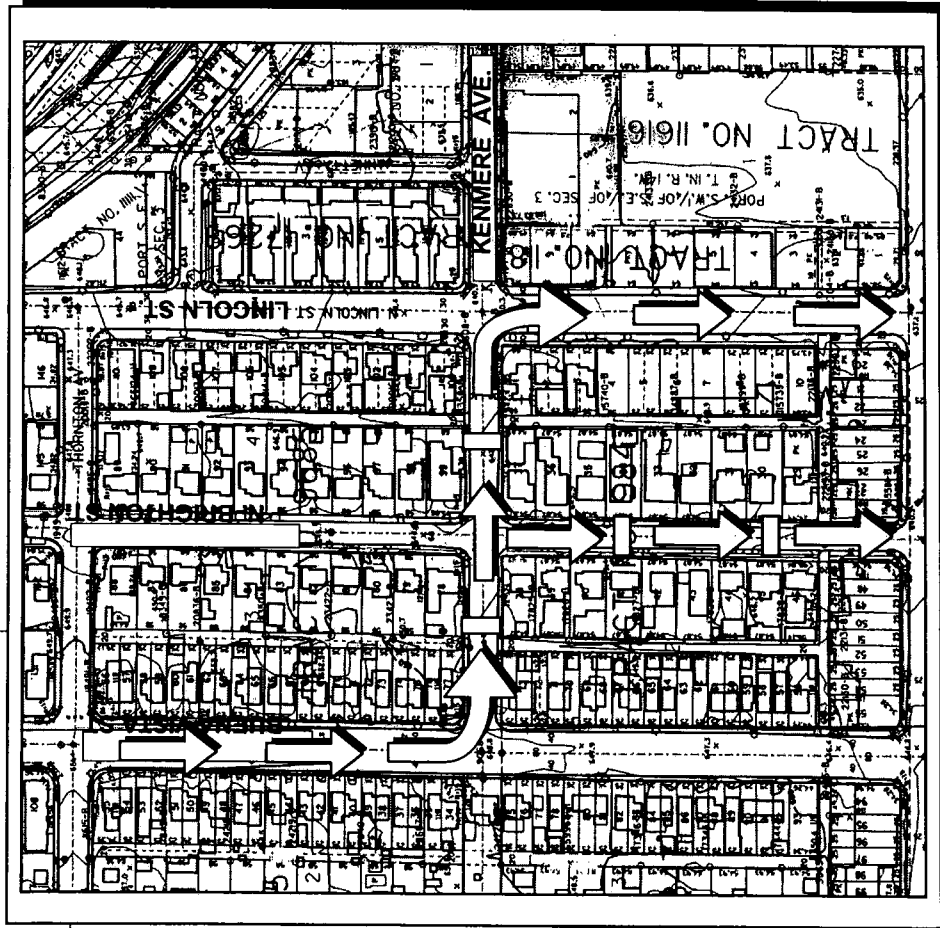


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Appendix B – Phase 1 Program Elements

Burbank Empire Center Neighborhood Protection Plan

Phase 1 Improvements

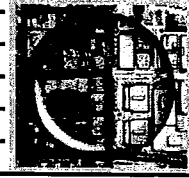


Speed Humps

Possible Locations

On Kenmere Ave. to slow down traffic and help minimize cut-thru traffic from Buena Vista.

Speed humps on southern section of Brighton St.



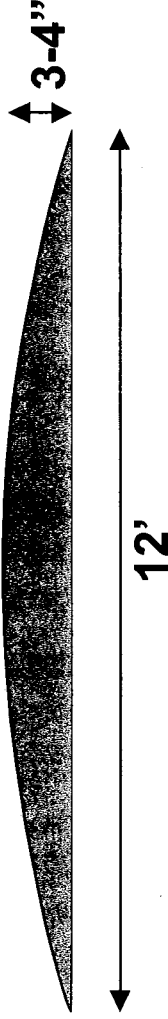
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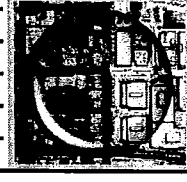
Phase 1 Improvements

Speed Humps

Typical Speed Hump Dimensions

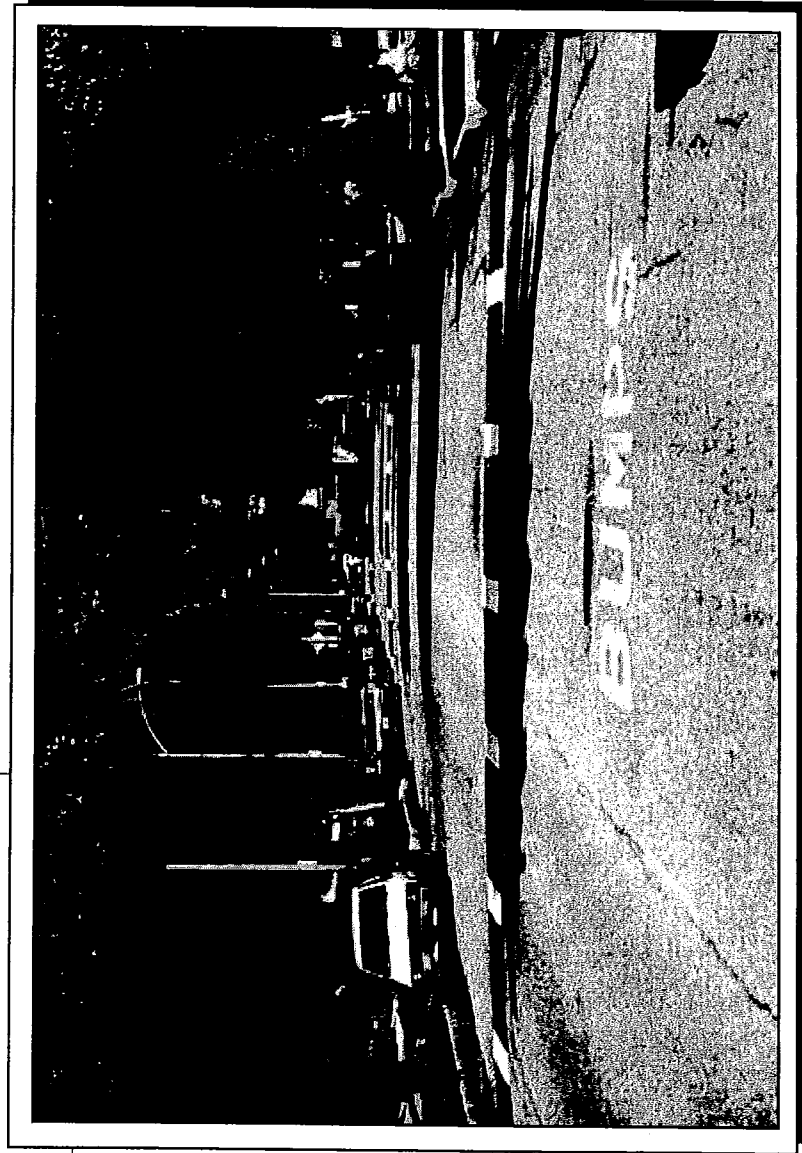


- Result in speed reduction to 15 mph near hump and 20-25 mph between humps.
- Location must avoid utilities, and driveways and ideally should be near a light pole.
- Spaced at 400' intervals, 200' from intersection.



Burbank Empire Center Neighborhood Protection Plan

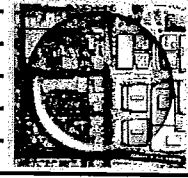
Phase 1 Improvements



Speed Humps

Examples

Pasadena



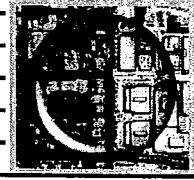
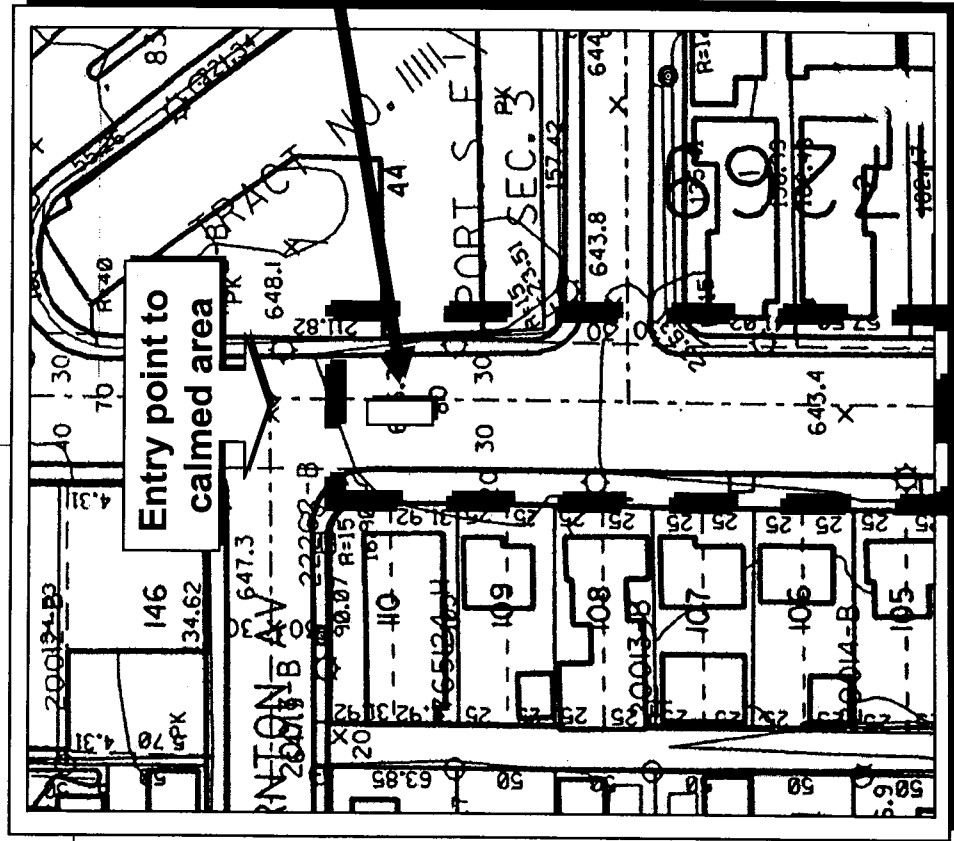
Burbank Empire Center Neighborhood Protection Plan

Phase 1 Improvements

Median Slow Point

Median slow point location at the northern entrance to the neighborhood.

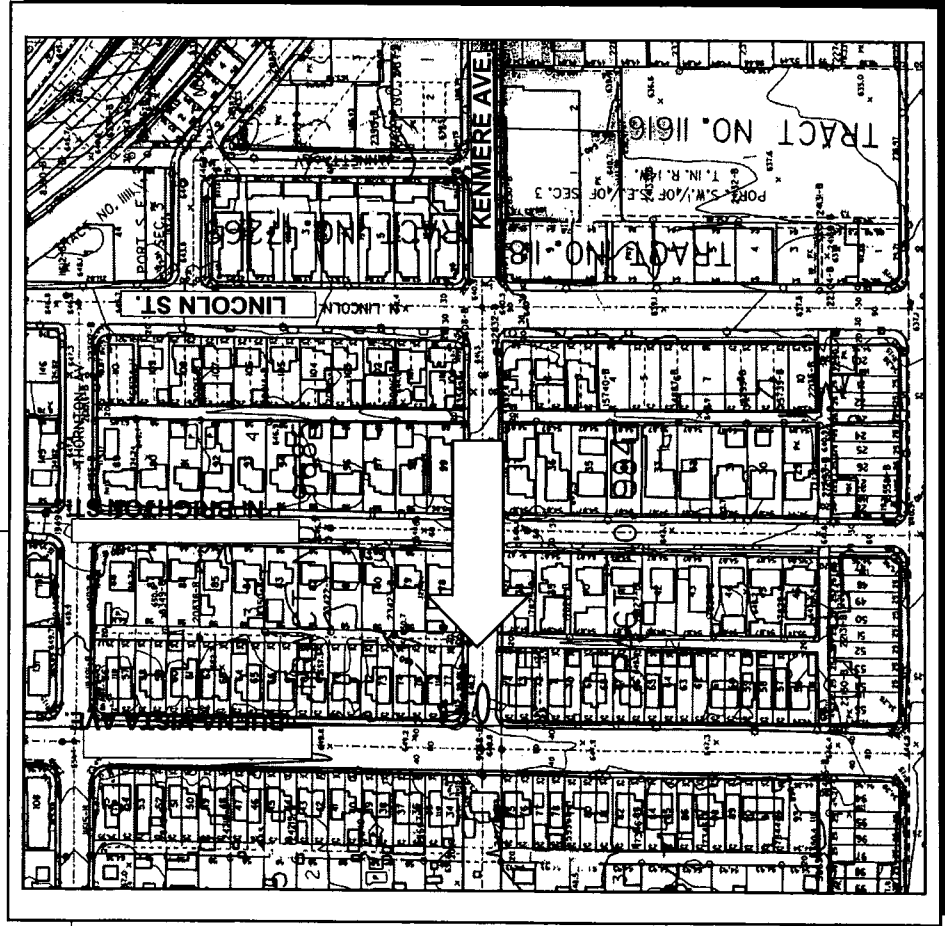
Goal to reduce road width and also reduce traffic speed.



Katz, Okitsu & Associates
Traffic Engineers and Transportation Planners

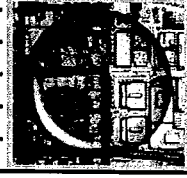
Burbank Empire Center Neighborhood Protection Plan

Phase 1 Improvements



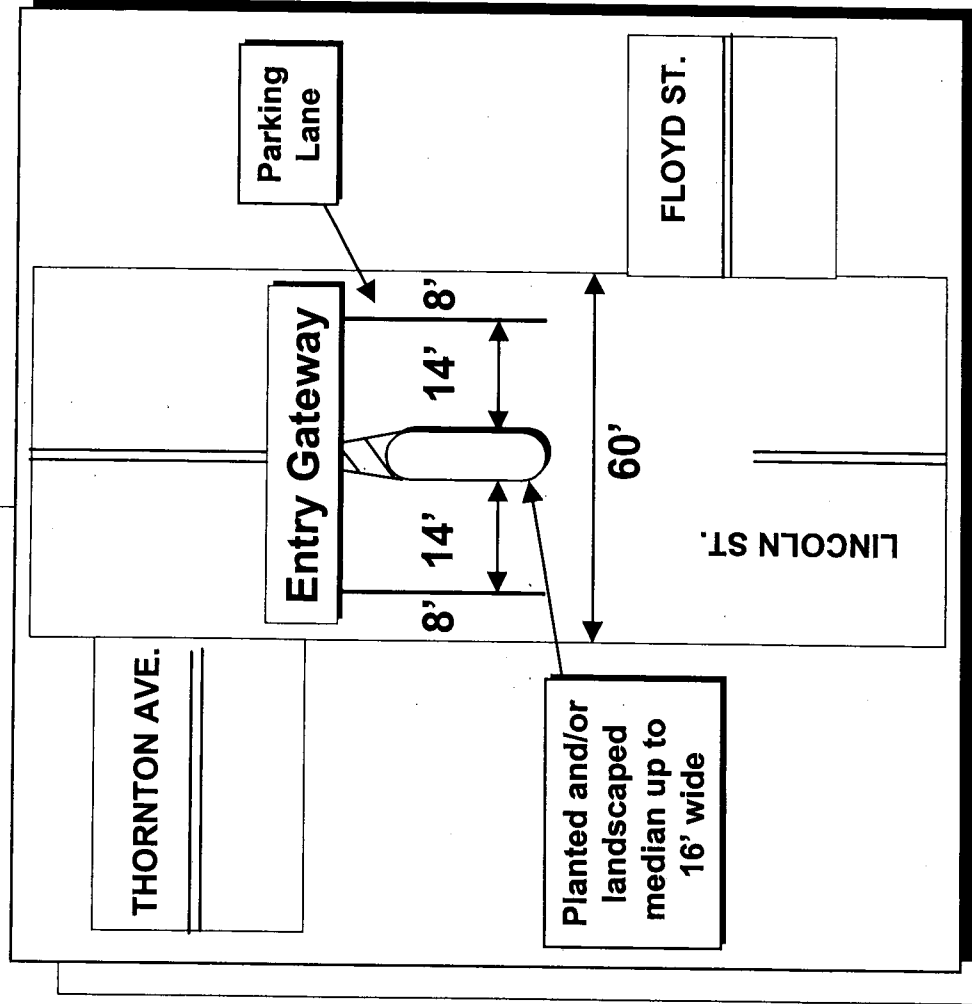
Median Slow Point

Median island at west end of
Kenmere Ave. forms an entry
point into the residential area
from the west.



Burbank Empire Center Neighborhood Protection Plan

Phase 1 Improvements



Median Slow Point

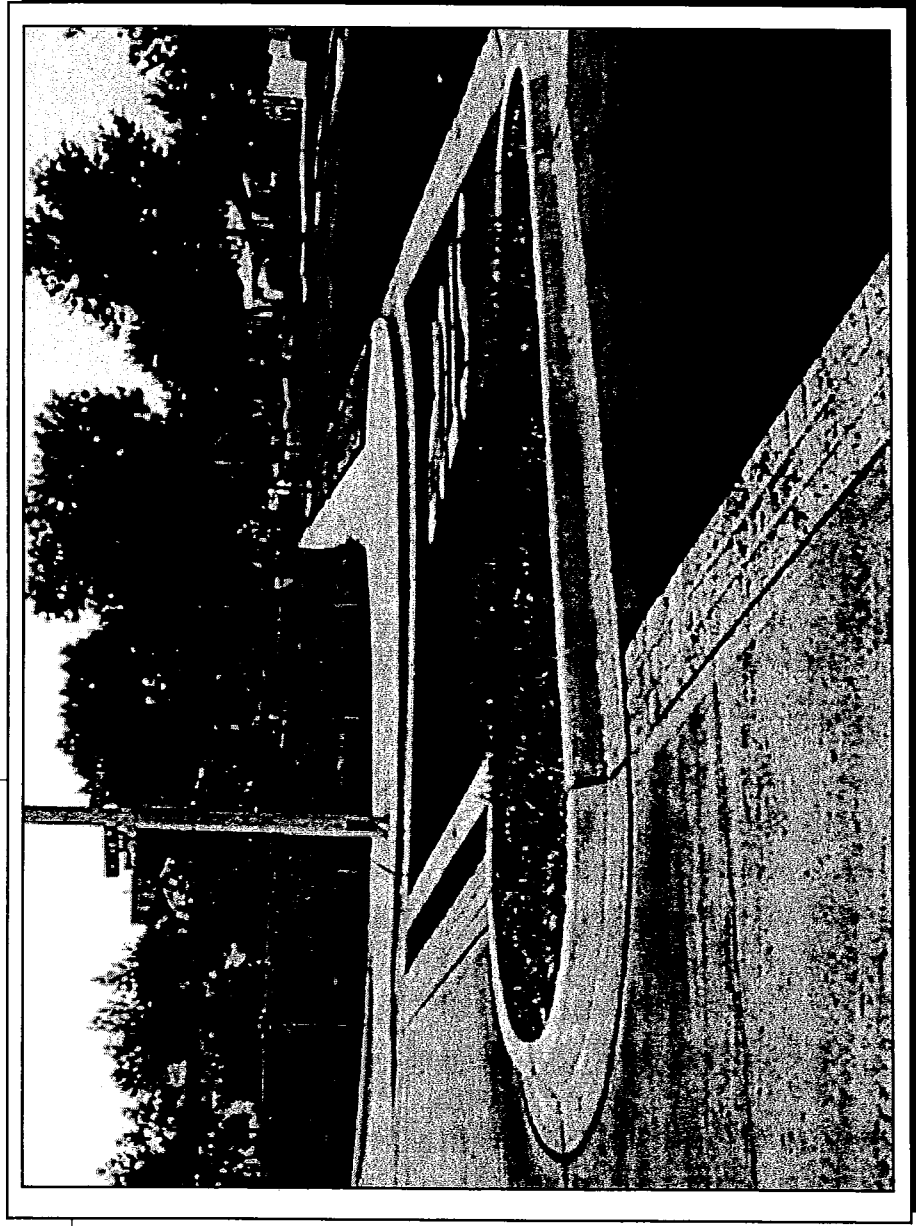
Median island at north end of Lincoln Street – forms an entry point into the residential area.

Reduces lane width to as much as 14' with 8' parking lanes.

Reduced lane width reduces travel speed and helps deter north/south access to Empire Center via Lincoln St.

Burbank Empire Center Neighborhood Protection Plan

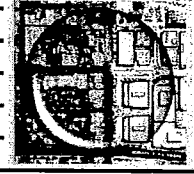
Phase 1 Improvements



Median Slow Point

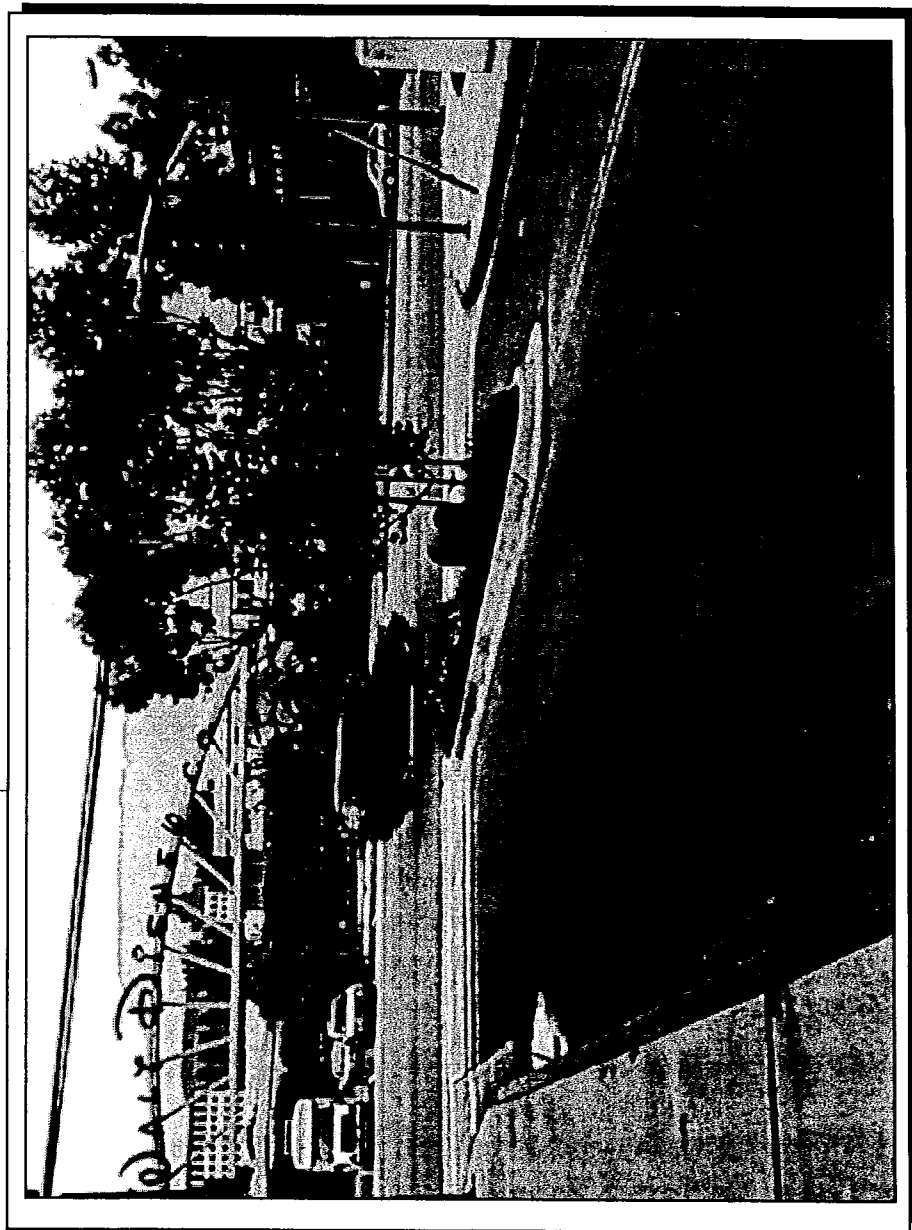
Examples

City of Burbank



Burbank Empire Center Neighborhood Protection Plan

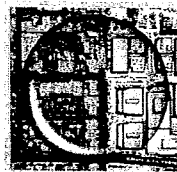
Phase 1 Improvements



Median Slow Point

Examples

City of Burbank



Burbank Empire Center Neighborhood Protection Plan

Phase 1 Improvements

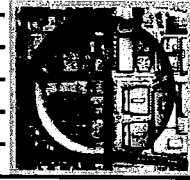
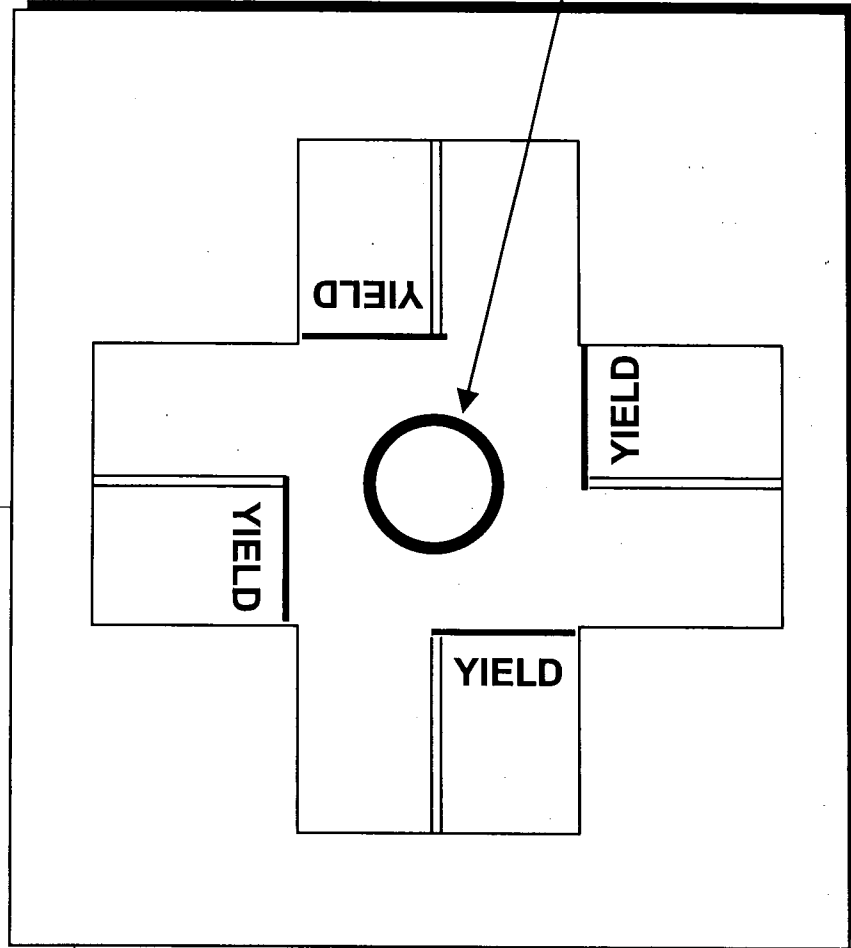
Temp Roundabout

Used to reduce traffic speeds
and to discourage cut-thru
traffic.

Phase 1 design is very simple
and inexpensive.

Can be used to evaluate
effectiveness

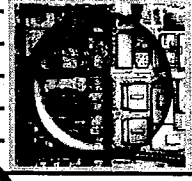
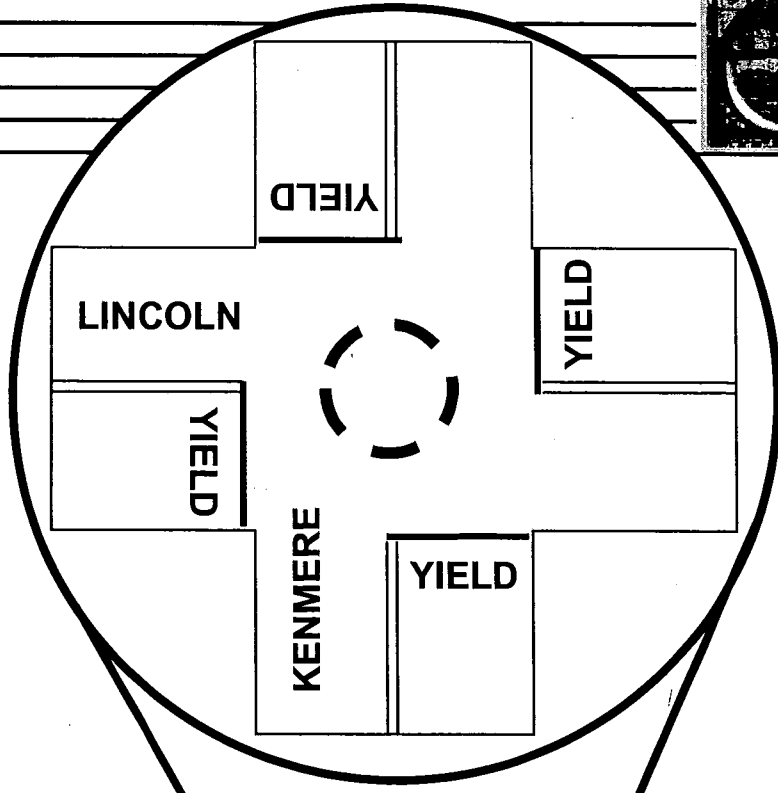
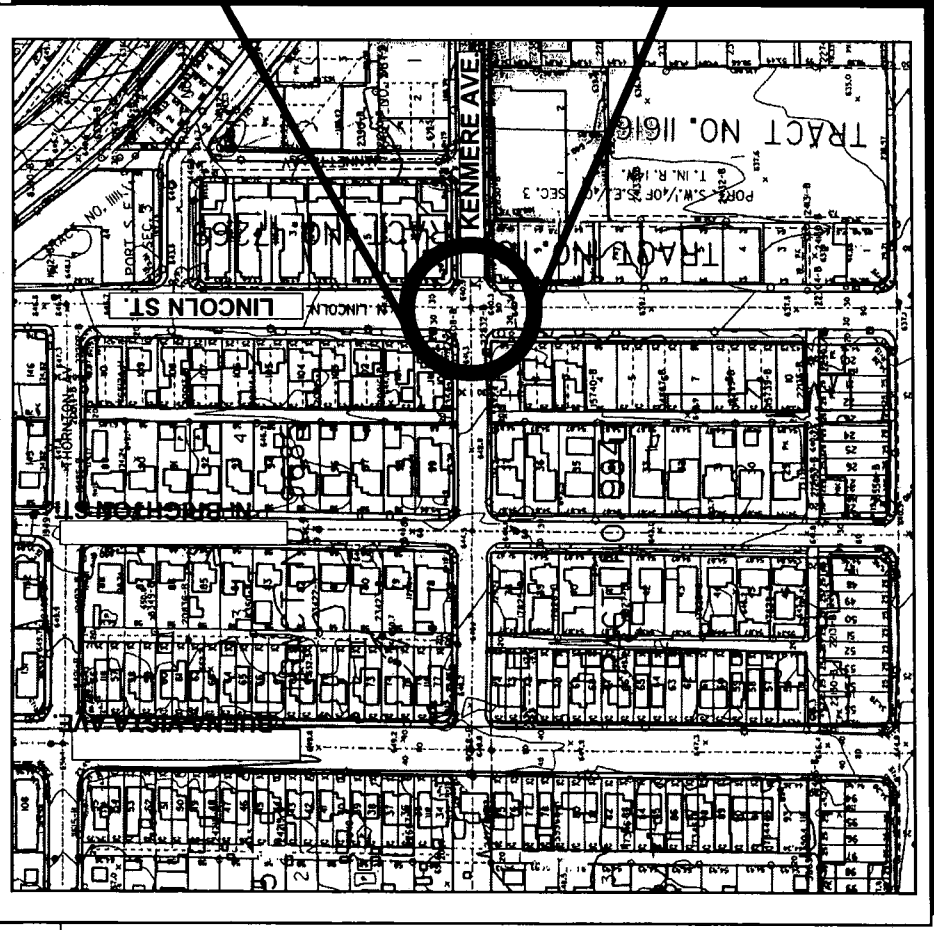
Concrete curb
delineators -- no
landscaping



Burbank Empire Center Neighborhood Protection Plan

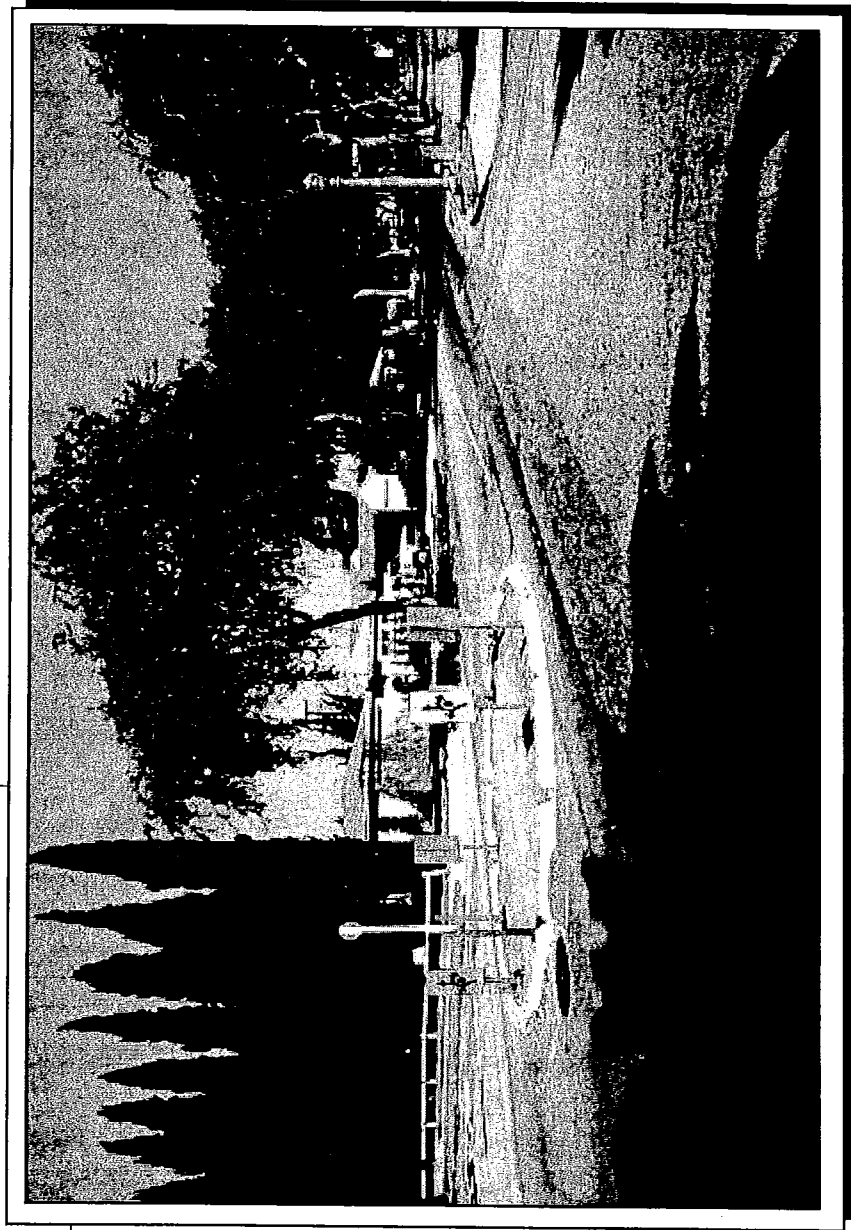
Phase 1 Improvements

Temp Roundabout



Burbank Empire Center Neighborhood Protection Plan

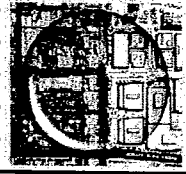
Phase 1 Improvements



Temp Roundabout

Example

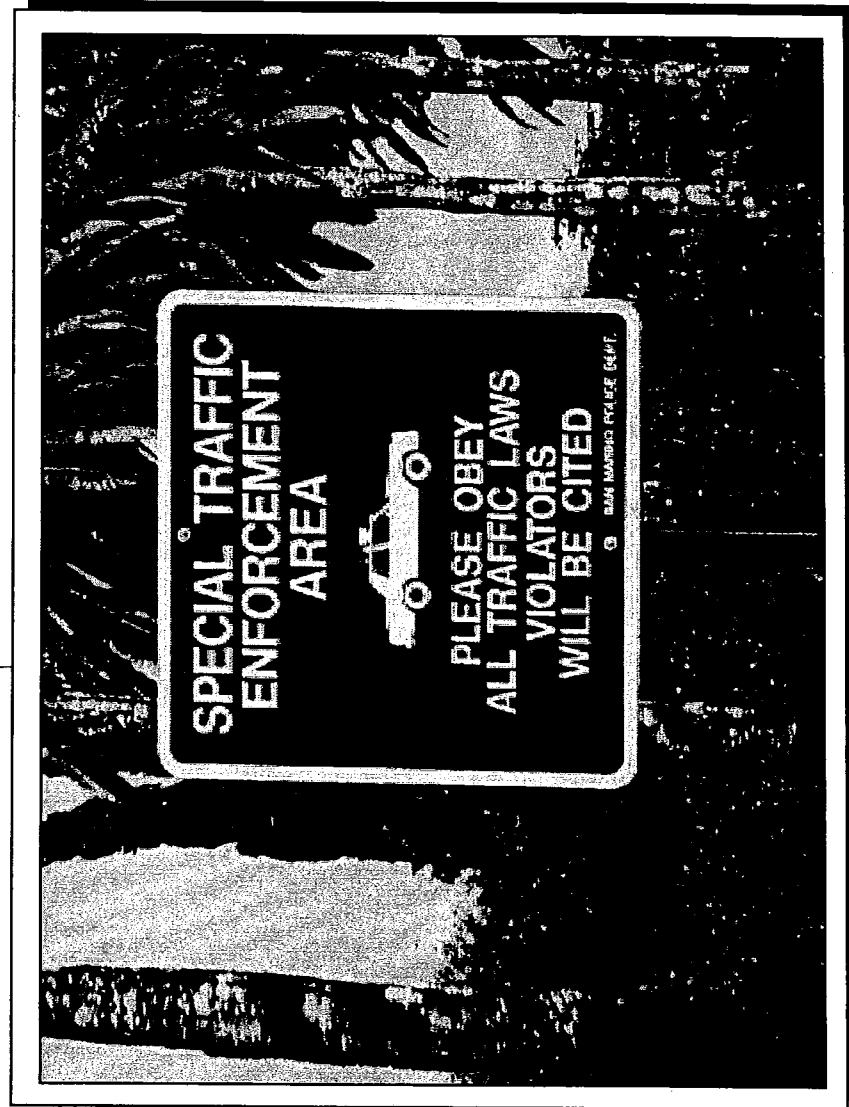
Culver City



Katz, Okitsu & Associates
Traffic Engineers and Transportation Planners

Burbank Empire Center Neighborhood Protection Plan

Phase 1 Improvements



Signage

Special Traffic
Enforcement Areas

Can help
reduce traffic
speeds and
enhance
"neighborhood"
image.



Katz, Okitsu & Associates
Traffic Engineers and Transportation Planners

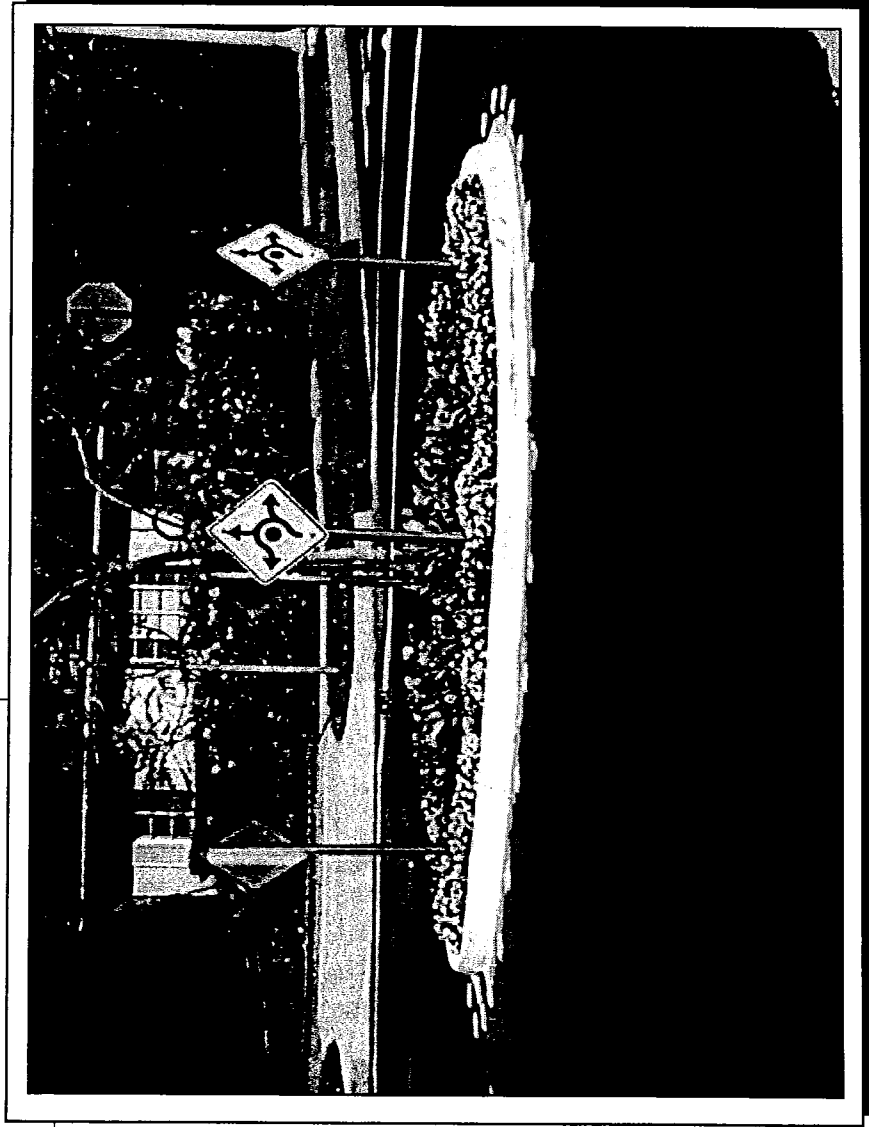


Appendix C – Phase 2 Program Elements

0

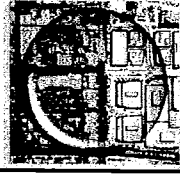
Burbank Empire Center Neighborhood Protection Plan

Phase 2 Improvements



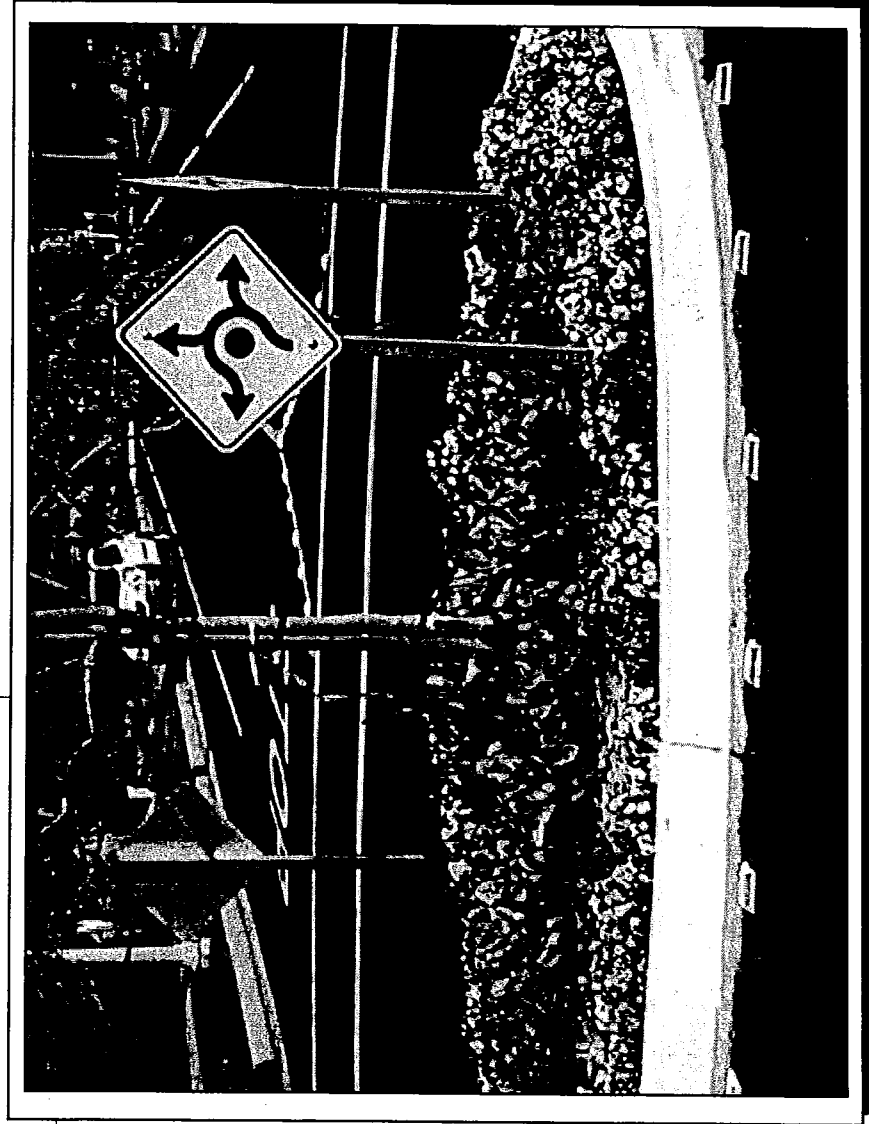
Roundabouts

Irrigation, planting and attention to detailing create an aesthetically pleasing but effective device to slow traffic



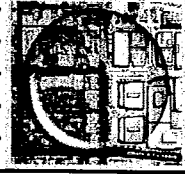
Burbank Empire Center Neighborhood Protection Plan

Phase 2 Improvements



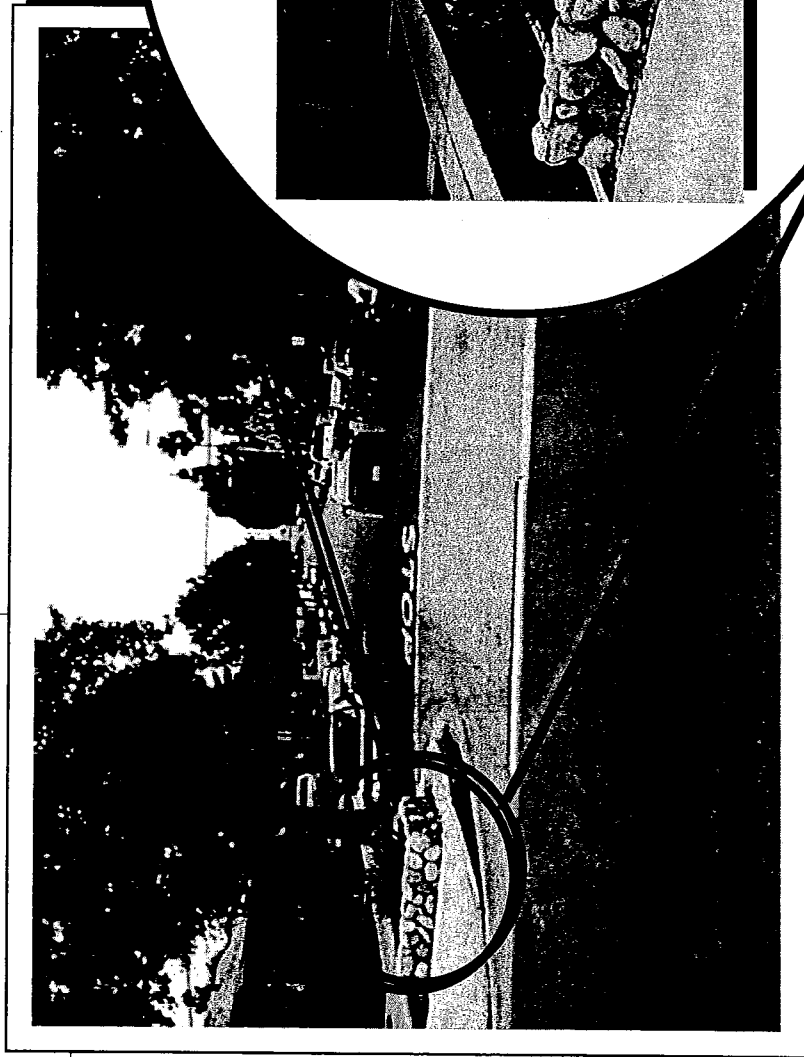
Roundabouts

Irrigation, planting and attention to detailing create an aesthetically pleasing but effective device to slow traffic

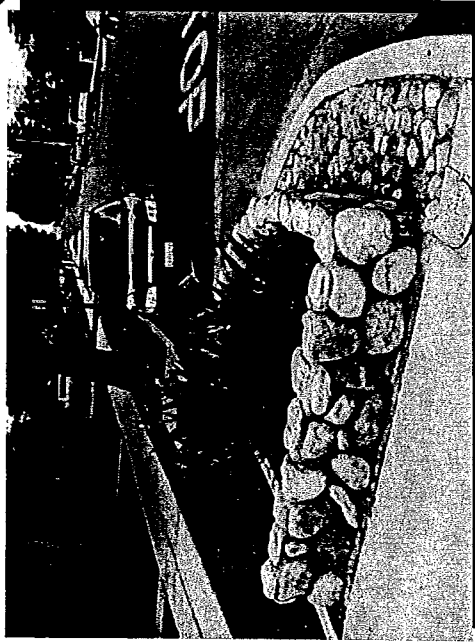


Burbank Empire Center Neighborhood Protection Plan

Phase 2 Improvements



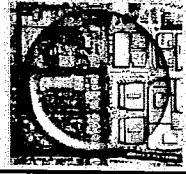
DETAIL



Permanent Bulges

Example 3

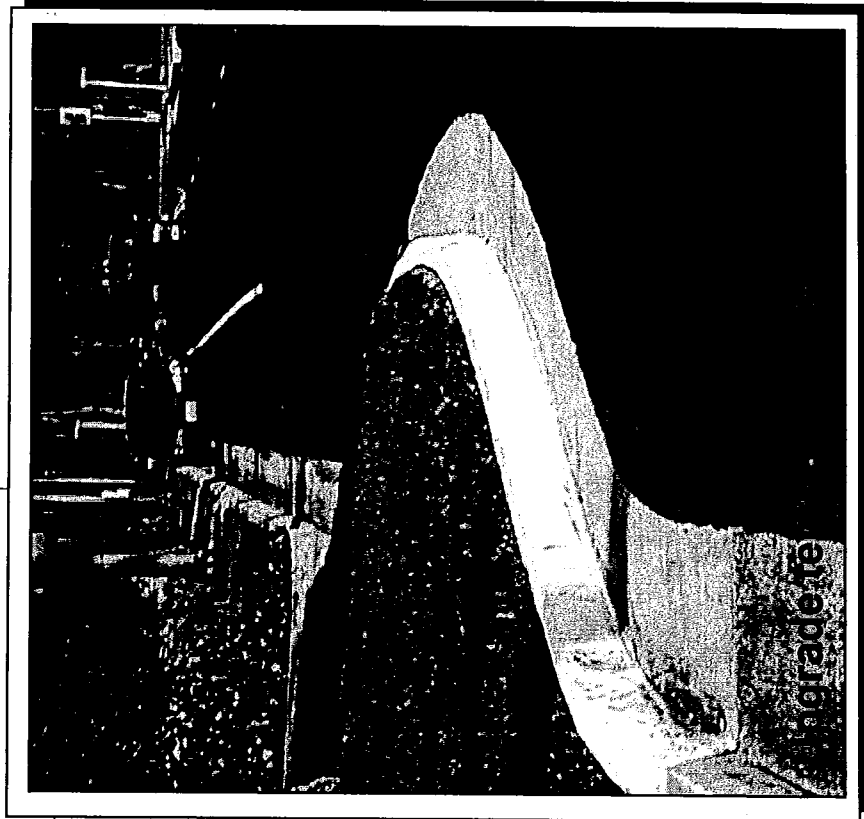
Burbank



Possibly a Phase 2 improvement

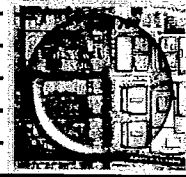
Burbank Empire Center Neighborhood Protection Plan

Phase 2 Improvements



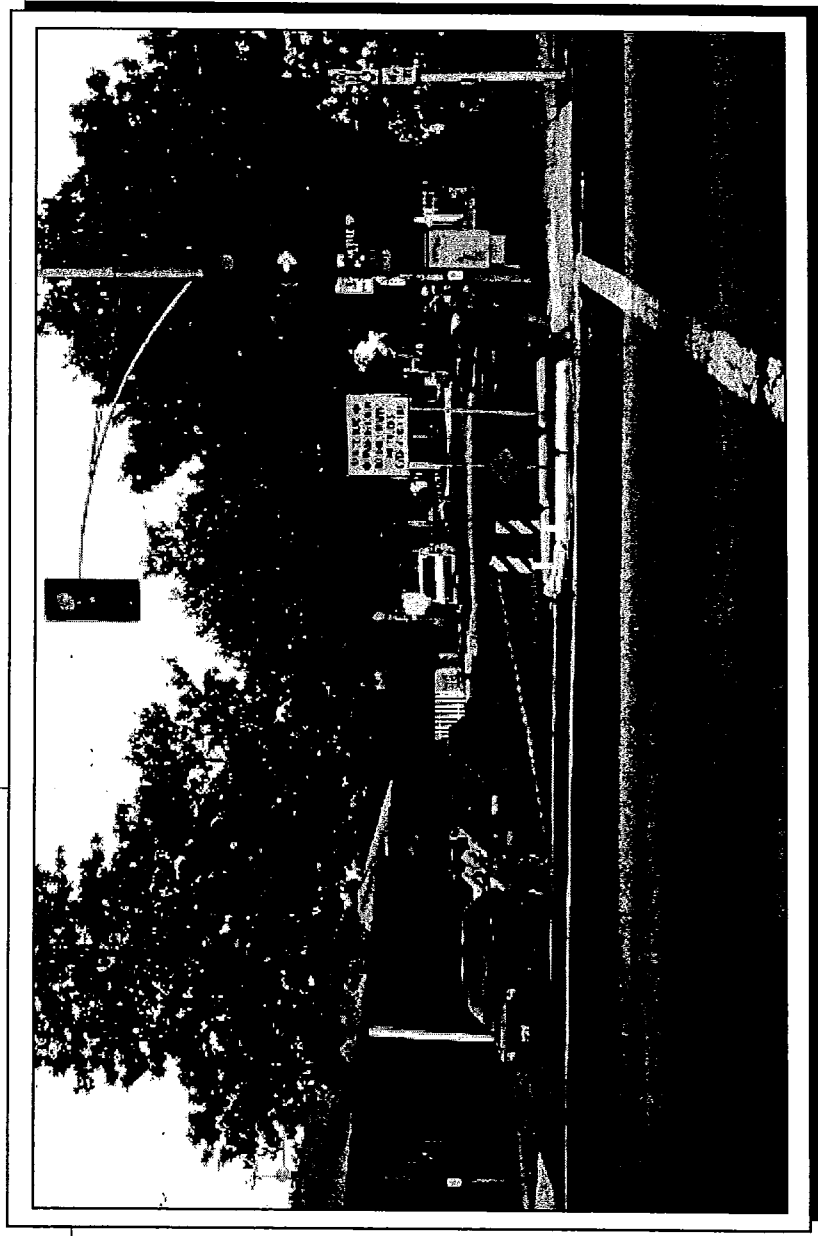
Permanent Bulges

Effective while
also enhancing
the look of the
street.



Burbank Empire Center Neighborhood Protection Plan

Phase 2 Improvements



Temporary Bulges

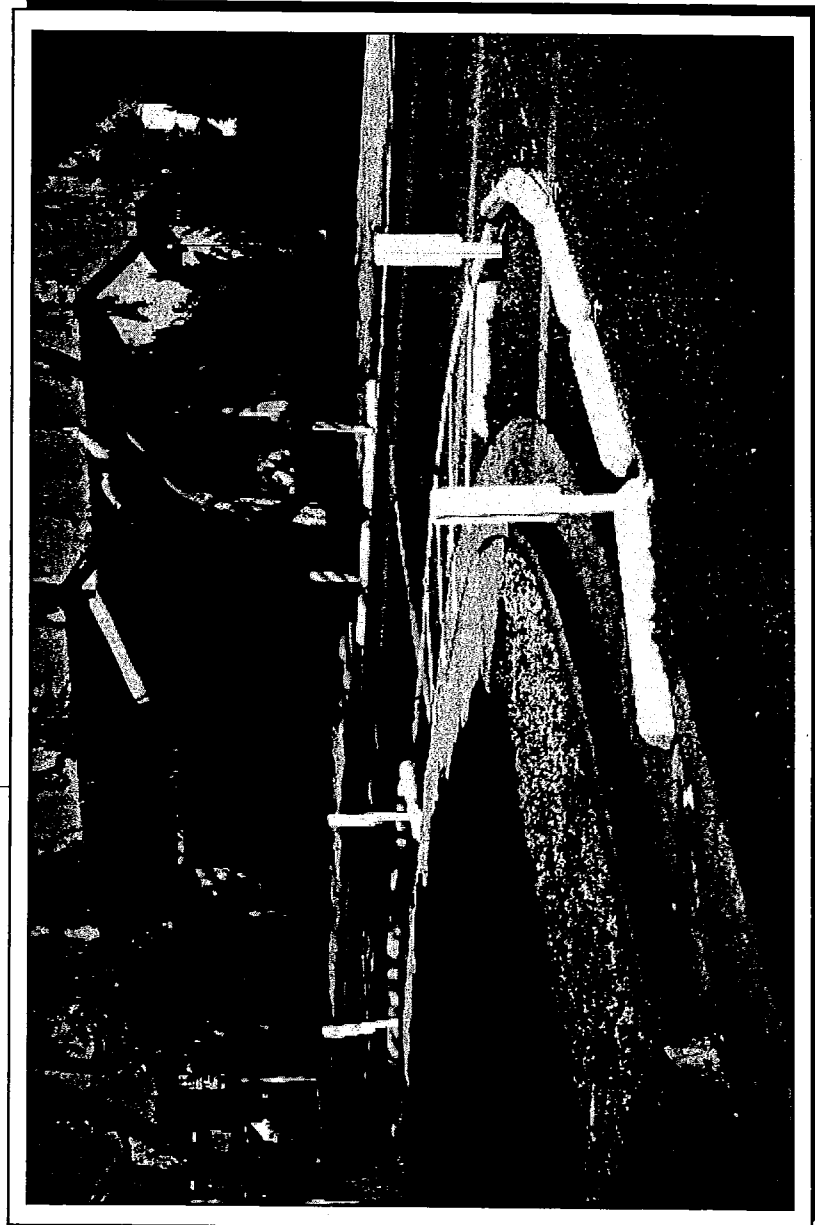
Example 1

Culver City



Burbank Empire Center Neighborhood Protection Plan

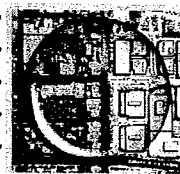
Phase 2 Improvements



Temporary Bulges

Example 2

Culver City



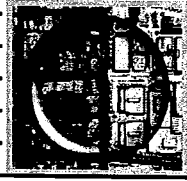
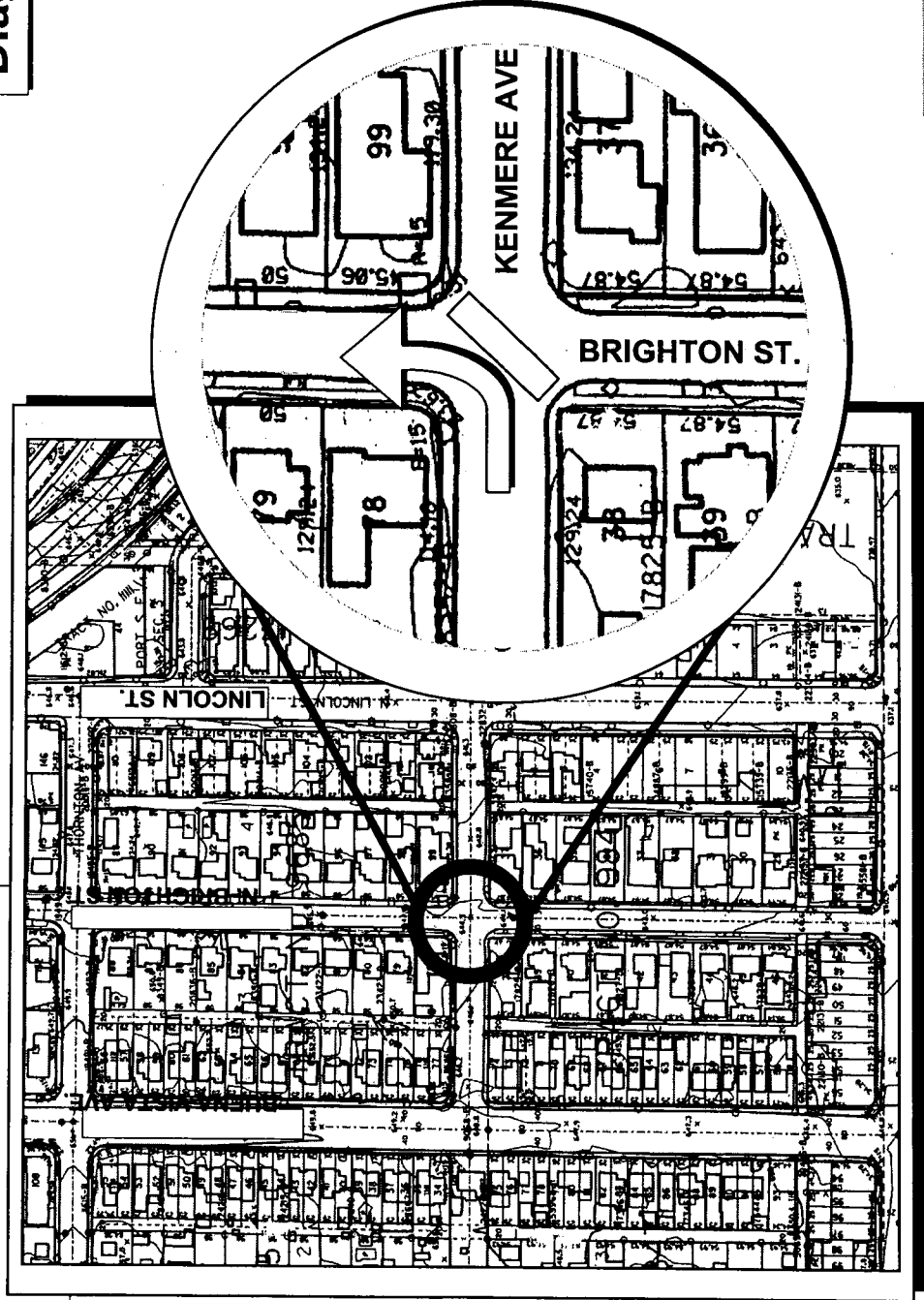
Burbank Empire Center Neighborhood Protection Plan

Phase 2 Improvements

Diagonal Diverters

Prevent traffic from using certain streets. Eliminates thru traffic on Kenmore Ave.

Only use if residents perceive cut-thru problem.



Appendix D - Estimated Costs by Phase

Estimated Costs by Phase*

Phase 1

Planted Median Slow Point	\$25,000
Signs x 6	\$ 5,000
Temporary Traffic Circle and signs	\$ 5,000
Speed Humps and Signs x 4	\$ 6,000
Traffic Counts	\$ 2,400
Design of NPP Program	\$16,000
Design/Eng of NPP Elements/Monitoring	\$40,600
<hr/>	
Total	\$100,000

Phase 2**

Planted Permanent Traffic Circle	\$30,000
Permanent Planted "bulges" x 4	\$20,000
Peak Hour Turn Prohibition Signs	\$ 1,500
Striped Parking Lanes	\$ 2,000
Traffic Counts	\$ 2,400
Planning and Engineering	\$20,000
Diagonal Diverter	\$50,000 (if needed)
<hr/>	
Total	\$ 125,900

Notes:

* - These are estimated costs only. More detailed costing should be undertaken during the design stage.

** - Phase 2 costs may be higher than indicated if additional strategies and measures are deemed necessary.